TURBO DIESEL

Buyer's Guide

A Publication of the ***Turbo Diesel Register***

A WORD ABOUT THE TURBO DIESELREGISTER

How did the Turbo Diesel Register get its start? First off, I'm an automotive enthusiast. An automotive enthusiast that was in search of a tow vehicle for my admittedly small collection of automobiles. As you can imagine, the search for the right tow vehicle took me in the direction of the Dodge/Cummins Turbo Diesel. My search was aided by the fact that my previous job was in the diesel engine profession as a Cummins distributor product support representative. Do I have a good knowledge of the Turbo Diesel engine? Well, maybe. I'll let you be the judge.

Back to the "story." As an automotive enthusiast, I am a member of a handful of car club/register type publications. In addition, I subscribe to just about every car and truck monthly publication in hopes that I can learn something more about my vehicles. The only vehicle I owned that didn't have its own club was the Turbo Diesel. The light goes on. Why not start a Turbo Diesel club? The light flickers. I know the immediate answer: not enough time, no money, and who would write the articles? Needless to say, the idea got put on the back burner. Another great idea, but ....

Looking back, that was eight long years ago. Prior to our first magazine (Fall '93) I took time to talk to other Turbo Diesel owners who wanted to know more about their truck and specifically the Cummins engine. At the time I knew the Turbo Diesel Register would work. I also knew it would be a lot of hard work with an up-front monetary investment and the commitment to publish a minimum of four issues that our initial membership had paid for.

Positive discussions with other club/register publishers and an unofficial "good luck" or two from the manufacturers, and well, I was still hesitant. Back to the all-important concerns: time, money and writing skills. Time? In the initial two-career-days it was nothing to stay up until 2:00 a.m. Money? What the heck, we took out a second mortgage. And writing skills? You've heard the saying, "if it is to be, it is up to me." Thus, we started the TDR.

PS. We hope you'll learn something from the following collection of tips and Dodge technical data. Please realize this booklet is just the "tip of the iceberg." The TDR and its members provide a wealth of information. How to join? Please fill-out and mail the order form below or register on-line at www.turbodieselregister.com.

Robert Patton
TDR Editor

Turbo Diesel Buyer's Guide

Table of Contents

LOOKING AT THE CHANGES – A TURBO DIESEL BUYER'S GUIDE

by Jim Anderson

Aside from the quarterly column and articles that I write for the TDR, I also serve as the "e-mail and call-back" guy. Yep, that means I get lots of correspondence from those interested in the TDR as well as those interested in the purchase of a truck. With the ever-changing ownership of vehicles, the idea of a Turbo Diesel Buyer's Guide makes perfect sense. To that end, the editor asked me to do a study of changes by model year to Dodge/Cummins trucks.

Since its1994 introduction, the current body style Dodge Ram pickup has undergone many changes and modifications.

To properly compile such a list, changes for each model year seem to build on each preceding model year, and therefore you may want to read from the start (1994) to see total changes and cumulative modifications for the particular model year you wish to research.

Each model year after 1994 contains changes in the form of additions and deletions to the previous model(s). Only major changes and major new options are covered. As you know, each year contains changes to paint colors and schemes, and interior upholstery colors and materials. These are not outlined in our research. Likewise, many minor technical adjustments and changes such as a change in tailgate hinge pin diameter are not listed, as they don't really affect the overall performance of a given model.

Changes and modifications covered will only be for those truck models (2500 and 3500 pickup and cab/chassis models) which were offered with the Cummins Turbo Diesel engine option package.

Sharp-eyed owners may pick up discrepancies and/or errors of omission. These errors are solely the responsibility of your columnist who was assigned this daunting task. I went with the information provided by Dodge's data books, which are written at the beginning of a model year and do not reflect later "running" production changes.

OVERVIEW

Warranty began in 1994 with a basic one year 12,000 mile warranty on the entire truck, and 5 year/ 70,000 mile powertrain warranty. The separate truck/powertrain warranties were consolidated and currently the package is 3 years/36,000 miles on the entire truck, including powertrain. Engine warranty has stayed constant at 5 years/100,000 miles.

Tow Ratings have changed considerably from year to year and from option model to option model, and even within option models, so read carefully if you are interested in or seeking such information. Some models were/are rated to tow much less weight than others. Watch out for "lightweights"!

PROBLEM AREAS: Please keep in mind that there is no such thing as the perfect truck or car. All vehicles will contain certain designs, systems, or parts that are more prone to failure than might normally be expected. Looking at these negatives, the image of the vehicle can be tarnished. However, to look on the positive side, the owner is aware of the problems and can take corrective action and make informed decisions. With these thoughts in mind, the following are common problem areas on the subject trucks.

Common Problem areas 1994-1998.5: Included failed engine start/run solenoids; frayed throttle cables; hard start due to degradation of the rubber fuel return line; automatic transmissions problems that were often caused by fluid loss at transmission line-to-cooler, line-to-transmission, quick couple *plastic* fittings; poor fuel filter access; loss of fifth gear in five-speed transmissions; failed front end parts on 4x4 models; poor front brake pad life in certain applications; poor paint adhesion of certain colors; failure of throttle position sensors on automatic trucks; and faulty fuel level sending units.

Common Problem areas 1998.5 to current: Included failed fuel transfer pumps and fuel injection pumps; weak clutch on six-speed trucks; poor front brake pad life in certain applications; and poor front suspension bushing life on 4x4 models.

FROM THE DATA BOOKS

The following information was compiled using DaimlerChrysler data books. Actual production may be slightly different, especially if a particular truck was produced near the beginning or end of a particular model year run.

We will start with the 1994 model, which is the first year of the current body style. For each model year we will note what's new, models available, engine ratings, transmissions, maximum tow ratings, cab/chassis models, and comments.

1994 Dodge Turbo Diesel

What is New: Introduction of the current truck platform. Everything is new.

Models offered: 2500 and 3500, two-wheel drive, four-wheel drive, standard cab, long bed only.

Cab: Rather revolutionary styling, which has since been emulated by other truck manufacturers. Styling changes included protruding grille and hood. Grille is attached to hood and raises with hood for improved underhood access. Cab has aerodynamically correct shape.

Offered only as a standard cab, long bed truck, and as a cab-chassis model. Two trim levels; ST in vinyl and SLT in cloth. Cab features include redesigned dash with full gauges featuring numbered graduations. All major cab controls designed to be operated by a gloved hand. An optional bench seat with a 40-20-40 center console split is offered with the center console capable of containing a laptop computer and cellular phone. Cab is attached to frame using resilient rubber donut cushions. Large sloped tinted windshield with parallel wipers, driver side air bag, open storage nook in right side of dash for future addition of passenger side air bag, cruise control buttons on steering wheel, and reclining driver seat.

Chassis: All new frames with combinations of boxed and "C" channeled sections for greater rigidity. Front suspension consists of independent coil springs with 4500 pound capacity front axles on 16" tires. Rear suspension is 60" long semi-elliptic leaf springs on a rigid axle of varying capacity ratings by model for improved ride quality. Two axle ratios are offered: 3.54 and 4.10:1. Three rear axles are offered: Dana 70 for 2500 automatics, hybrid Dana 80 for 2500 manual, and Dana 80 for 3500 trucks and cab-chassis trucks. The long tapered rear springs offer a smoother, less choppy ride over rough roads. The truck bed is rigidly mounted to the frame, and is only offered as a sweptside design 8 foot box. The bed also features indents in the bed to allow building a framework to carry multi-tiered loads. Bed tiedown mounts are standard front and rear. The tailgate is detachable.

Engine Ratings: The Cummins B 5.9 diesel was offered in two horsepower/torque ratings: 175HP/420 ft-lbs torque for manual transmissions, and 160/400 for automatic transmissions. New is an inline Bosch fuel injection pump (designated P7100). Intake air plumbing has been re-designed for greater airflow. The turbocharger is a wastegated design.

Transmissions:
Five-speed manual NV4500HD, 5th overdrive. 450 ft-lbs input torque capacity.
Four-speed automatic 47RH, 4th overdrive with locking converter. 380 ft-lbs torque capacity.

Looking Back: Being an all-new model, this truck had a number of teething problems which resulted in both federal safety recalls and factory TSB fixes. Chief among recalls was a fix for keys sticking in the backside of the steering wheel, causing the wheel to jam; recalls for various covers to be installed on steering shaft linkages, and headlight switches burning out.

Major owner gripes centered around poor fuel filter and oil filter access, moisture intrusion and retention into cab and cab doors, vision obstruction by the A-pillars, poor adhesion of certain colors of paint, failure of the OEM Goodyear tires to maintain their balance, loss of fifth gear in the manual transmissions, fraying of the unsheathed throttle cable.

Conclusions: These trucks have proven to be very durable, though not particularly good looking after several years of use. Owners have reported driving them in excess of one million miles without *any* major internal engine work.

1995 Turbo Diesel

What is New:
Extended cab.
Revised paint schemes and colors.

Models Available:
2500HD as standard cab, extended cab, long bed, 4x2 and 4x4.
3500: same as above.

Engine Ratings:
Same sas 1994 model year.
175 HP and 420 ft-lbs. for manual transmission.
160 HP and 400 ft-lbs. for automatic transmission.

Transmissions:
No changes from 1994.
Five-speed manual 4500HD 5th overdrive.
Four-speed automatic 47RH 4th overdrive with locking converter.

Maximum Tow Ratings:
2500 and 3500:
3.54 Axle, maximum GCWR is 14,100 pounds.
4.10 Axle, maximum GCWR is 16,000 pounds.

Cab/Chassis Models:
None.

Comments:
The 1995 model is largely a carryover from the 1994 model year with the exception of the introduction of the extended cab.

1996 Turbo Diesel

What is New:
Deleted tailgate top protector.
Deleted SLT tape stripe.
Added optional Camper suspension package.
Revised optional radio.
Revised alternator rating to 136 amps.
Revised “RE” electronic control of automatic transmission.

Models Available:
2500HD as standard cab, extended cab, long bed, cab chassis, 4x2, and 4x4.
3500: same as above. No short bed models available.

Engine Ratings:
Increased for 1996
215 HP and 440 ft-lbs for manual transmission.
180 HP and 420 ft-lbs for automatic transmission.
California engines were rated lower at 1995 specs. At mid-year 1996 California engines were required to have exhaust gas recirculation (EGR).

Transmissions:
Five-speed manual NV4500 5th overdrive.
Four-speed automatic 47RE 4th overdrive with locking converter. This is a new electronically controlled transmission.

Maximum Tow Ratings:
2500 regular cab, manual or automatic, 3.54 axle: 10,500 pounds; 16,000 GCWR.
2500 regular cab, manual or automatic, 4.10 axle: 12,300 pounds; 18,000 GCWR.
Derate trailer weight for 4x4: 3.54 axle -500 pounds; 4.10 axle -400 pounds.
Derate trailer weight for extended cab: -0

3500 regular cab, manual or automatic, 3.54 axle: 10,500 pounds, 16,000 GCWR.
3500 regular cab, manual or automatic, 4.10 axle: 11,900 pounds, 18,000 GCWR.
Derate trailer weight for 4x4: 3.54 axle ratio - 800 pounds; 4.10 axle -400 pounds.
Derate trailer weight for extended cab: 3.54 ratio -800; 4.10 ratio -400 pounds.

Cab/Chassis models:
Available in regular cab only. 2500 is 8,800 GVWR, 56" C/A (cab rear to rear axle centerline) dimension. 3500 is 11,000 GVWR and available in 60" and 84" C/A dimensions.

Comments:
Trailer tow ratings begin to get confusing. Lazy performance complaints stem from computer programming of new electronically controlled automatic transmission. Exhaust Gas Recirculation added to California trucks (1/1/96) to meet CARB emissions standards. Owners begin to find out how easy and inexpensive it is to “turn up the power.”

1997 Turbo Diesel

What is New:
Hydraulic power brake booster powered from power steering pump.
Increased weight capacity to 11,000 GVW on club cab 3500 models.
Remote keyless/ illuminated entry option.
New AM/FM/Cassette/CD player option.
Leather interior group option.

Models Available:
2500HD as standard cab, extended cab, long bed, cab chassis, 4x2 and 4x4. Combo of short box extended cab diesel not offered.
3500: Same as above. No short bed models available.

Engine Ratings:
Same as 1996 model year.
215 HP and 440 ft-lbs for manual transmission.
180 HP and 420 ft-lbs. for automatic transmission.
California engines continue with EGR but are offered with 180 HP and 420 ft-lbs of torque in both automatic and manual transmission applications.

Transmissions:
No changes from 1996.
Five-speed manual NV4500HD, 5th overdrive.
Four-speed automatic 47RE 4th overdrive with locking converter.

Maximum Tow Ratings:
2500 manual 4x2 regular and extended cabs: 20,000 GCWR.
2500 automatic 4x2 regular and extended cab: 3.54 axle, 16,000 GCWR; 4.10 axle, 18,000 GCWR.
2500 manual and automatic 4x4 regular and club cabs: 3.54 axle 16,000 GCWR; 4.10 axle 18,000 GCWR.
3500 manual 4x2 regular and extended cabs: 20,000 GCWR.
3500 automatic 4x2 regular and extended cab: 3.54 axle 16,000 GCWR; 4.10 axle 18,000 GCWR.
3500 manual 4x4 regular and extended cabs: 3.54 axle 16,000 GCWR, 4.10 axle 18,000 GCWR.
3500 automatic 4x4 regular and extended cabs: Regular cab, same as above. Extended cab, 4.10 axle only, 18,000 GCWR. 3.54 ratio not available with extended cab automatic option.

Cab/Chassis models:
Available in regular cab only. 2500 is 8,800 GVWR, 56" C/A (cab to axle) dimension. 3500 is 11,000 GVWR and available in 60" and 84" C/A dimensions. New options include rear helper spring and stabilizer bar group, 9.24 section modulus frame, snowplow prep group with some engine/transmission combos.

Comments: California trucks have exhaust gas recirculation and net horsepower is lower. Last full year of the 12-valve engine production.

1998 Turbo Diesel

What is New:
Quad cab option featuring doors on each side of extended cab with no “B” pillar.
Front seat belts integrated into seats on all extended cab and quad cab trucks.
New interior with redesigned dash. Dash is electronic on 98.5 models.
2500 short box extended cab and quad cab model with diesel is available.
Passenger side airbag with disable switch is standard.
Next generation airbags.
Heated power mirrors.
Illuminated door lock and power window switches.
Optional security alarm system.
24-valve electronic controlled injection diesel offered as a ’98.5 model.
Revised fifth gear nut on five-speed manual transmission.

Models Available:
2500HD: as standard cab, extended cab, quad cab, short bed, long bed, cab chassis, 4x2 and 4x4.
3500: Same as above. No short bed models available.

Engine Ratings:
12-valve head, mechanical injection pump.
215 HP and 440 ft-lbs. for manual transmission except California.
180 HP and 420 ft-lbs. for automatic transmission and California manual transmission. California engines continue with EGR.

Note: A ’98.5 engine was introduced (1/1/98) to meet more stringent emissions standards. It included electronic control of fuel injection and a 24-valve cylinder head. Rated at 235HP and 460 ft-lbs. of torque for manual applications and 215/420 for automatic transmissions. No rating difference for California, as the 98.5 engine was 50-state certified without EGR.

Transmissions:
No changes from 1996.
Five-speed manual NV4500HD 5th overdrive.
Four-speed automatic 47RE 4th overdrive with locking converter.

Maximum Tow Ratings:
2500 regular cab, extended cab, quad cab, manual, 4x2, 3.54 or 4.10 axle 20,000 GCWR. Except 12-valve California trucks, 3.54 axle is 16,000, 4.10 axle is 18,000 GCWR.
2500 regular cab, extended cab, quad cab, automatic 4x2 and all 4x4 models; 3.54 axle 16,000 GVWR, 4.10 axle 18,000 GVWR.
3500 regular cab, manual, 4x2, 3.54 or 4.10 axle is 20,000 GVWR.
3500 extended cab, quad cab, manual, 4x2 and 4x4; 3.54 axle 16,000 GCWR, 4.10 axle 18,000 GCWR.
3500 extended cab, quad cab, automatic, 4x2 and 4x4, 3.54 axle 16,000 GCWR, 4.10 axle 18,000 GCWR.

Cab/Chassis models:
Available in regular cab only. 2500 is 8,800 GVWR, 56" C/A (cab to axle) dimension. 3500 is 11,000 GVWR and available in 60" and 84" C/A dimensions.

2500 and 3500 manual have 20,000 pound tow rating with either axle in 4x2 and 4x4.
2500 and 3500 automatic 4x2 and 4x4 have 16,000 GCWR with 3.54 axle and 18,000 GCWR with 4.10 axle.

Comments:
Watch tow ratings carefully! Mid year introduction of the 24-valve engine for cleaner emissions. Early problems with failed fuel lift pumps and locked up injection pumps. Owners find out that a 4.10:1 axle ratio is better for towing with the 24-valve engine, since the power band has been moved higher in the RPM range. 24-valve engine governed RPM is raised to 3,200. Electronically controlled fuel injection produces a flat torque curve from 1700-2700 RPM. In November of ’98, Dodge issues a bulletin to all dealers informing them that exhaust brakes are not approved for use with automatic transmission-equipped trucks (Issue 24, page 38).

1999 Turbo Diesel

What is New:
Deleted extended cab option in middle of model year.
Deleted side body trim from aft of rear wheels.
Electronic dash with all gauges run by computers.

Models Available:
2500HD as standard cab, extended cab, quad cab, short bed, long bed, cab chassis, 4x2 and 4x4.
3500 same as above, except no short beds.

Engine Ratings:
Same as ‘98.5 model year.
24 valve electronic injection control 235HP 460 ft-lbs torque for manual transmissions.
24 valve electronic injection control 215HP 420 ft-lbs torque for automatic transmission.
Peak torque available from 1700-2700 RPM.

Transmissions:
Five-speed manual NV4500HD 5th overdrive.
Four-speed automatic 47RE 4th overdrive with locking converter.
Six-speed manual NV5600 6th overdrive – late availability and soon withdrawn from sale.

Maximum Tow Ratings:
All configurations and axle ratios of manual transmission trucks: 20,000 GCWR.
All configurations of automatic transmission trucks: 3.54 axle 16,000 GCWR, 4.10 axle 18,000 GCWR.
Note: Maximum permissible trailer weight will vary by model and options. For example, 4x4 models are rated for lower maximum trailer weights than 4x2 models, and extended/ quad cab models are rated for lower maximum trailer weights than standard cab models. Highest trailer weight rating is for a 2500 regular cab 4x2 manual transmission long bed = 14,150 pounds trailer.
Lowest trailer weight rating is for a 3500 quad cab 4x4 automatic transmission 3.54 axle = 9,050 pounds trailer.

Cab/Chassis Models:
Available in regular cab only. 2500 is 8,800 GVWR, 56" C/A dimension. 3500 is 11,000 GVWR and available in 60" and 84" C/A dimensions. Tow ratings are same as above.

Comments:
Six-speed transmission removed from sale due to quality control issues.
Users find the 4.10 axle ratio is best for towing with the 24-valve engine.

2000 Turbo Diesel

What is New:
Optional fold away towing mirrors.
Optional automatic dimming rear view mirror.
Revised front disc brakes with two piston calipers.
4 wheel anti lock brakes standard on 3500 series trucks.
Added radio with CD changer controls. Changer is a dealer installed Mopar accessory.
Deleted body side moldings from entire bed sides.
Deleted extended cab option, leaving only the quad cab option.
Anti-spin rear axle only available in 4.10 ratio.
Optional 265/75R/16E Michelins on 7.5 x 16" cast aluminum wheels for all 2500 models.
3500 series standard tires are now LT235/85R/16E using steel wheels of greater offset.

Models Available:
2500HD as standard cab, quad cab, short bed, long bed, cab chassis, 4x2 and 4x4.
3500: Same as above. No short bed models available.

Engine Ratings:
Same as '98.5/'99 model years.
235HP 460 ft-lbs torque for manual transmissions.
215 HP 420 ft-lbs. torque for automatic transmissions.

Transmissions:
Five-speed manual NV4500HD 5th overdrive.
Six-speed manual NV5600 6th overdrive.
Four-speed automatic 47RE 4th overdrive with locking converter.
The six-speed manual transmission has the same first and overdrive ratios as the five-speed, with an additional ratio interposed between second and fourth gears. Fifth gear is direct.

Maximum Tow Ratings:
2500 regular cab and quad cab, 4x2, both manual transmissions, both axle ratios 20,000 GCWR.
2500 regular cab and quad cab, 4x4, both manual transmissions, both axle ratios 20,000 GCWR with the exception of the quad cab 4x4 short bed 3.54 axle=16,000 GCWR; 4.10 axle=18,000 GCWR.
2500 regular cab and quad cab, 4x2 and 4x4, automatic; 3.54 axle=16,000 GCWR, 4.10 axle= 18,000 GCWR.
3500 regular cab and quad cab, 4x2 and 4x4, long bed, both manual transmissions, both axle ratios, 20,000 GCWR.
All 3500 automatics: 3.54 axle=16,000 GCWR, 4.10 axle=18,000 GCWR.

Cab/Chassis Models:
Available in regular cab only. 2500 is 8,800 GVWR, 56" C/A (cab to axle) dimension. 3500 is 11,000 GVWR and available in 60" and 84" C/A dimensions. GCWR is same as tow ratings above.

Comments:
The 2000 model year Dodge truck was a production run of only three months. Effective on 1-1-2000, Dodge introduced their trucks as 2001 models. Coinciding with the 2001 pickups, Dodge introduced the 2001 PT Cruiser. For corporate average fuel economy (CAFE) criteria, the PT Cruiser is classified as a truck. We speculate the long model run of 2001 truck goes hand in hand with the higher mileage PT Cruiser, thus giving Dodge an edge in the CAFE numbers. The six speed manual transmission remained on back order all year due to high demand.

2001 Turbo Diesel
Also 2001.5 models

What is New:
New "sport" and "off road" badges.
Added child seat top tether anchors on quad cab rear seat.
Four-wheel disc brakes are standard with vented rotors in rear, integral drum parking brake as a 2001.5 model.
Four-wheel ABS standard, with new dynamic rear proportioning braking system as a 2001.5 model.
Servoless speed control for manual transmission diesels.
Forged aluminum wheel option on 2500 trucks.
One touch drivers side power window down feature on SLT and + packages.
New engine ratings of 235 HP/460 ft-lbs. for both five-speed and automatic transmissions.
New optional engine rating of 245HP/505 ft-lbs for the six-speed transmission.

Models Available:
2500HD as standard cab, quad cab, short bed, long bed, cab chassis, 4x2 and 4x4.
3500 same as above except no short beds.

Engine Ratings:
235 HP 460 ft-lbs. torque for five-speed manual and automatic transmissions.
245 HP 505 ft-lbs. torque (HO engine) for six-speed manual transmission only.

Transmissions:
Five-speed manual NV4500HD 5th overdrive.
Six-speed manual NV5600 6th overdrive, available only with the HO engine.
Four-speed automatic 47RE 4th overdrive with locking converter.

Maximum Tow Ratings:
2500 regular cab and quad cab, 4x2 and 4x4, both manual transmissions, both axle ratios, 20,000 GCWR.
3500 regular cab and quad cab, 4x2 and 4x4, both manual transmissions, both axle ratios, 20,000 GCWR. Exception: 3500 4x2 and 4x4 six-speed manual with 4.10 axle is rated at 21,500 GCWR.
2500 and 3500 regular cab and quad cab, 4x2 and 4x4 with automatic transmissions are rated 3.54 axle=16,000 GCWR, 4.10= 18,000 GCWR.
Note: Maximum permissible trailer weight will vary by model and options. Highest trailer weight rating is for a 3500 regular cab 4x2 six-speed 4.10 axle= 15,150 pounds. Lowest trailer weight rating is for a 3500 quad cab 4x4 automatic 3.54 axle= 9,000 pounds.

Cab/Chassis Models:
Available in regular cab only. 2500 is 8,800 GVWR, 56" C/A dimension. 3500 is 11,000 GVWR and is available in 60" and 84"C/A dimensions. Tow ratings are same as above with maximum for 3500 six-speed 4.10 axle of 21,500 GCWR.

Comments:
The six-speed transmission remains on back order due to high demand.
New disc brake rear axle and standard 4 wheel ABS greatly enhances stopping ability on '01.5 trucks.
All truck functions are increasingly controlled by computer electronics.

Conclusion/More Data

As a note from the editor, I'd like to thank Jim for his efforts in compiling the data for the Buyer's Guide pages. Researching through the details in the Dodge data books was a difficult task. And the task is not yet complete…

It is our hope to use this data as the springboard to an ever-changing document on the TDR's web site. We will ask members to post their positive experiences with their year model trucks. Factual input from members concerning the minutiae of changes for a given model year will be documented.

Look for this document as a start to a much larger discussion of used Dodge Turbo Diesels. As the Buyer's Guide is incorporated into the web site, it will serve as a much-needed resource. TDR members will be able to help prospective used truck buyers by sharing experiences. Thanks, members.

BUYING A USED TRUCK

By Jim Anderson

When you buy a new truck, you are protected by a manufacturer's warranty and the integrity of the dealer from whom you purchase. When buying a used vehicle, you are much less protected by the law and frequently will have no warranty from a manufacturer to fall back on in case of a problem. Therefore you must be much more careful in inspecting your intended purchase. The benefits to the used truck purchase: the vehicle cost is less than new, used trucks typically have had the "new vehicle" bugs fixed, and they represent greater value for the dollar since the initial depreciation has already been taken by the first owner.

A whole market has sprung up in the last few years for used Dodge/Cummins turbo diesel trucks, fueled in part by the high cost of a new one, and by the fact that even trucks with high mileage have lots of life left in them due to the legendary reliability and durability of the Cummins diesel.

This has had a side benefit in that used Dodge/Cummins trucks have retained a greater percentage of their resale value than the average for all diesel trucks, and they command high prices on used vehicle lots. This means you may pay more for your truck but will get more for it when you eventually become a seller. A well maintained truck with high mileage should not be disregarded as a good value, since with good regular maintenance these trucks can reliably run half a million miles and more!

Vehicle purchasing can be divided into two parts. One is buying the metal, and the other is buying the money used for the purchase. Your goal as a used truck purchaser is to get both parts right.

How do you select just the right truck, and how do you make sure it has been well maintained? You surely don't want to buy a "lemon" when an engine can cost upwards of $7,000, a new transmission can cost upwards of $3,500, and a P-7100 rebuilt injection pump can cost you $1,400. Here are some buying tips to help you find just the right one for you!

Keep in mind that this is likely the second largest purchase you'll ever make, second only to a home. Some folks spend more on their transportation in their lifetime than they spend on housing. While you may live in one place your entire life, the average owner trades vehicles once every five years. Every dollar saved on the purchase price of either a home or a vehicle will also save on interest dollars paid back if you are getting a loan. So a dollar saved may actually amount to as much as $1.25 over the life of the loan.

Inform Yourself

Before you ever set foot on a dealer lot or peruse the want ads, take the time to familiarize yourself with the various models and options offered by the manufacturer, and see how they match your intended use. Narrow your search down to those models and model years which fit your budget and which will do the intended job. Select only those models with the options you want. Make a list of specifications, keep it with you during your search, and keep to your list.

For example, if you determine you want a truck for hauling and towing, but want an extended cab model with SLT interior, do the research to find which models and options are required to tow the intended weight, then stick to inspecting trucks which meet those criteria. Your familiarization session will lead you to ask the right questions when you visit the dealer lot or make contact with private sellers.

Next, check the used vehicle value guides. Most banks and other agencies that make car loans will have a variety of used vehicle value guides such as the Kelly Blue Book or NADA book that list wholesale, retail, and loan values for each model, each accessory, and offer mileage compensation factors. These books are filled with option facts and regional pricing, so can serve as a useful guide to true worth. For those with a computer, walk your fingers across a computer keyboard and visit the various web sites that offer needed information. These include Kelly Blue Book (kbb.com), NADA used truck guide (NADA.com), carprice.com, edmunds.com, and others. The dot com sites often track actual prices paid for trucks in your area or in a nearby metropolitan area.

If you want to research a particular truck, web sites exist that allow you to check a particular serial numbered truck for lost, stolen, totaled, reconstructed, etc, titles (carfax.com) for a nominal fee. You can also determine if a vehicle has been included in federal safety recalls by visiting several other sites. Mining information from the web can be rewarding, though time consuming, but the more thorough your research at this stage, the more informed you will become as a buyer.

Now is also the time to make a call to your automobile insurance agent for a rate quote to make sure there are no after-the-purchase unpleasant surprises in this part of truck ownership.

If you plan to get a loan for the vehicle, now is also a good time to shop around for the best interest rate and payment plans, and to get approval for the loan. It is as important to shop for the cost of money as it is to negotiate a good price for the truck. After you have done your research, then it is finally time to go looking for just the right truck! You now have a pretty good idea of what you want, what you might have to pay, and how you're going to pay for it.

My advice is to buy the latest model truck with the lowest mileage that you can afford. The newer the truck, the lower the maintenance and repair costs are likely to be over time. Look for a well-maintained "cream puff." They're out there, but it is up to you to find them.

Inspection Time

In looking at a used vehicle, don't be dazzled by surface shine. Look behind the shine to uncover a vehicle's true condition. Look at the truck's overall cleanliness. There is a difference in appearance between a good cleanup job and continuous regular cleaning over the truck's life to the present. Look at the interior for worn carpets and upholstery. (The editor's favorite place to check for attention to detail cleanliness – the door jambs. A clean door jamb typically indicates a vehicle that has been fanatically maintained.) Wear should be commensurate with mileage. Look underneath the body for caked mud and dirt. This indicates off-road operation or an unintentional trip into the ditch. Look under the hood. Lots of dirt can indicate severe use and little maintenance.

Check for worn or chafed hoses, oil leaks, coolant leaks, etc. Pull the dipsticks and check fluid colors and condition.

Sight down the body sides to see if the panels are smooth. If they're wavy, the truck has been wrecked, and further inspection underneath will reveal the severity of the accident. Paint color differences between panels and or variations in body seam gaps also indicate a wreck in the truck's past.

Inspect tires for uneven wear to determine if there are suspension or axle problems. This can also be an indicator of improperly repaired wreck damage.

Look for lube drips from the underside of the engine, transmission and axles. Seal repairs may have to be made. A light oil drip or evidence of misting near the engine road draft tube is normal. Look in the glove box and console to see if any maintenance receipts or records have been left behind and compare them with what you see. Go for a ride and note if the engine idles smoothly and pulls strongly. Do the transmission and clutch work as intended? Does the automatic transmission shift without slipping or "hanging between gears"? Do the brakes pull to one side? Does the truck steer correctly?

While driving, note if there is excessive smoke from the exhaust. Black smoke indicates overfueling or a clogged air filter. White or gray smoke indicates excessive oil getting by the piston rings or an injection pump problem. A puff of smoke of any color at startup is normal, but should abate when the engine warms.

Walk around the truck immediately after the ride and note any smells of hot dragging brakes or leaking fuel. A hot oil smell can indicate an oil leak onto the exhaust system.

Don't be embarrassed to ask to put the truck up on a lift for a more thorough inspection, or to take the truck to a trusted mechanic for a professional inspection. A professional independent inspection for a fee is cheap insurance that you are making a wise purchase decision. After you are fully satisfied that the truck is what it is represented to be, move on to the next step.

Contact the Owner

There are many possible reasons why this particular truck came to be for sale, and it is up to you to determine the true reason. Is the owner financially able to afford a new vehicle with more fancy gadgets, or was the owner tired of fixing a problem or problems repeatedly? Is the owner simply selling a vehicle that is no longer needed? It is up to you to find out.

When you find a likely candidate and your search narrows to a specific vehicle you may want to buy, consult your list again to make sure it meets all criteria. First on your "to do" list following a second general walk-around inspection and a ride-and-drive session of a particular truck should be some research to find out who the former owner was and initiate a conversation.

If you're buying from a dealer, ask the owner what the mileage was at turn in time and on what date the vehicle was turned in. If the truck has been in a dealer's possession for a while, has it been used for hauling chores with no maintenance? Have other potential buyers shied away from it for some reason not readily evident? Find out why. Ask the former owner what maintenance has been performed and when, and if the truck has been wrecked. What was it used for? Was it satisfactory for that use? If the owner has maintenance records, arrange to pick them up if you buy the truck.

Finishing Up

You've done the research, negotiated the price, and now it is time to exchange dollars for the vehicle. The job's not done until the paperwork is finished – and the paperwork had better be right! If buying from a dealer, you should receive a bill of sale and certification of the odometer reading, along with several other pieces of paper, which will vary by state. Usually the dealer will apply for a new title in your name. If buying from a private individual, you should receive a clear title signed over to you by the owner. You will then take the title to your vehicle registration place to get a new title in your name.

Either a bill of sale from a dealer or a signed title from the owner should be placed in your hands at the time you give them your check – no exceptions, and no excuses by the seller. Remember, the job's not done until the paperwork is right!

Make sure the serial number on all paperwork agrees with the serial number stamped into the left front corner of the dashboard. Paperwork mistakes in this area are frequent and hard to correct later.

Before driving your new purchase home, call your insurance agent to insurance. Failure to do so could have disastrous consequences just down the road.

Finally, if there is any remaining warranty on the vehicle, be sure to fill out and send in the paperwork to get it transferred to you. If the truck is less than five years old and has less than 100,000 miles on the odometer, you should transfer the remaining engine warranty. That's it. You now own your new (to you) truck, and if you have researched fully and purchased carefully, you'll have many miles of enjoyable cruisin' ahead of you.

Technical Service Bulletins

Not surprisingly, there have been comments by those unfamiliar with the truck (prospective new/used buyers, Internet, truck shows) that "the Turbo Diesel certainly has its share of problems." To them, no doubt, the grass looks greener on the other side.

Although some will dwell on the problems, the majority of owners take initiative to solve/correct, anticipate/prepare for a future situation. That's what the TDR is all about!

Thanks to the TDR membership group and the support from DaimlerChrysler and Cummins we are equipped with answers and solutions, rather than wonderment and isolation that would exist without a support group. My thanks goes out to the TDR members for being a supportive membership group.

DODGE TECHNICAL SERVICE BULLETINS

With the brief introduction out of the way, this is our review of Dodge Technical Service Bulletins issued in the previous years. For a given calendar year, all Dodge vehicle TSBs are published in book format and are available for purchase in July/August. As a service, we purchase the TSB directory and then search through the book for only those bulletins relating to the Turbo Diesel truck.

In an effort to consolidate the TSBs for the magazine, we use the same index system categories as DaimlerChrysler. Below are the index categories.

2	Front Suspension	14	Fuel
3	Rear Axle	16	Propeller Shafts & U-Joints
5	Brakes	18	Vehicle Performance
6	Clutch	19	Steering
7	Cooling	21	Transmissions
8	Electrical	22	Wheels & Tires
9	Engine	23	Body
11	Exhaust	24	Air Conditioning
13	Frame & Bumpers	26	Miscellaneous

A note concerning the TSBs and their use: the bulletins are intended to provide dealers with the latest repair information. Often the TSB is vehicle identification number (VIN) specific. VIN data on the Chrysler service network helps the dealer in his service efforts. A TSB is not an implied warranty.

TSB's Issued During '95 and Prior

CATEGORY 2 FRONT SUSPENSION

TSB #	MODELS	SUBJECT/DESCRIPTION
02-05-95 5/15/95	'94 - '95 (BR) 4x4 4x2 Cab Chassis	*Rattling/clunk type noise from front of vehicle.* Verify that the stabilizer bar is built with the correct ball stud links. If necessary, the bulletin details the replacement of both stabilizer links with tapered ball stud links.
02-02-94 2/11/94	'94 (BR)	*Service manual revisions for torque values on front suspension.*
02-07-94 6/15/94	'94 (BR)	*This information bulletin differentiates the track bar used on different vintage trucks.*
02-08-94 7/22/94	'94 2500 (BR) Cab Chassis with sales code XBC	*Low ride height on 8800 GVW cab chassis.* The bulletin describes abnormal low ride height in the rear where the truck is loaded near GVW. It lists the parts necessary to replace the shocks and rear leaf springs.
02-20-94 12/2/94	'94 (BR)	*Service manual revision for torque values on stabilizer link bar.*
02-02-91 1/28/91	'92 (AD) 2wd vehicles only	*Front spring spacer for two wheel drive trucks.* The condition is a vehicle leaning or low on the left front corner. The repair involves the installation of a spacer (4322629) on the left coil spring to raise the left front corner approximately one inch.
02-06-90A 12/17/90	'90 - '91 (AD) 2wd vehicles only	*Front spring spacer for two wheel drive trucks.* The condition is a vehicle leaning or low on the left front corner. The repair involves the installation of a spacer (4322629) on the left coil spring to raise the left front corner approximately one inch.
02-09-90 11/19/90	'89 - '90 (AD) 4wd	*Service manual revision for camber specification.*

CATEGORY 3 REAR AXLE

TSB #	MODELS	SUBJECT/DESCRIPTION
03-03-95 5/5/95	'94 - '95 (BR)	*Rear axle trac-loc chatter.* This bulletin supersedes 03-01-94 (7/8/94) and applies to trac-loc Dana model 60, 70 and 80 axles. The symptom is chatter while turning corners. The bulletin involves draining and refilling the axle with new fluid and trac-loc additive. It is important that gear oil 4796517 and trac-loc additive 4318060 be used.
03-02-93 5/7/93	'92 - '93 (AD)	*Launch shudder/vibration.* For 1992-1993 131" or 149" wheelbase trucks. Describes repair procedure to adjust the pinion angle of the rear-end to eliminate vibration or shudder in the 1-2 shift made at medium to heavy throttle. This TSB does not address "wheel hop" that occurs with manual transmission trucks at start off. Wheel hop is a function of driveline spring wrap up because of high torque being exerted on the pinion shaft.

CATEGORY 5 BRAKES

TSB #	MODELS	SUBJECT/DESCRIPTION
05-09-95 B 9/22/95	'94 - '95 (BR) All 4x4 and 3500 4x2 Club Chassis only	*Drift left or right under moderate or hard braking.* The symptom is a drift right or left during moderate to hard brake applications just short of antilock operation. The condition is more evident with worn brakes. The steering wheel remains straight ahead - truck drifts. The repair is not to correct a condition where the steering wheel moves during the drift. If steering wheel moves, a brake system inspection, according to the service manual, is in order. The repair involves installing shems between the wheel and (2500) hub/bearing assemble, (3500) hub extension as required.
05-02-95 3/24/95	'94 - '95 (BR) 3500 4x4/4x2 2500 4x4	*Front brake noise on trucks with 86 mm diameter caliper pistons.* The symptom is a squeal noise when applying the brakes for a normal stop. The repair involves grinding or filing a chamfer on both ends of the front brake pads.
05-03-94 3/4/94	'94 (BR)	*Service manual revision for brake bleeding procedure on trucks equipped with ABS brakes.*
05-21-94 10/21/94	'89 - '93 (AD)	*Premature brake wear on trucks with 12" brake drums.* The bulletin involves replacement of the rear brake shoes (linings) with revised shoes.
05-08-93 A 9/3/93	'94 (BR)	*Pedal feel/characteristics of ABS brakes is the subject of this information only bulletin.*
05-15-93 11/1/93	'94 (BR)	*Brake pedal noise.* The symptom is a squawk caused by the metering valve spring chattering when the brake is depressed. The bulletin involves the installation of a revised metering valve.
05-04-92 A 4/21/92	'89 - '92 (AD) sales code BKH, BKJ	*Premature brake wear on trucks with 12" brake drums.* The bulletin involves replacement of the rear brake shoes (lining) with revised shoes.
05-01-91 1/28/91	'81 - '91 (AD)	*Rear wheel anti-lock speed sensor connector repair procedure.* If a red/amber ANTILOCK warning light illuminates and a code 9 diagnostic code is found, a possible cause is the connector for the RWAL speed sensor. The bulletin describes the repair procedure and parts needed to correct the problem.
05-05-91 8/12/91	'90 - '91 (AD)	*Front disc brake noise from Bendix disc brakes.* The bulletin applies to trucks with Bendix disc brakes (3.38" caliper pistons). Noise can occur and the repair involves grinding a chamfer on both ends of the outboard brake pad.
05-07-90 9/24/90	'89 - '90 (AD)	*Rear wheel anti-lock faults caused by water contamination.* A possible cause for illumination of the BRAKE and ANTILOCK warning lamps could be water contamination of the 4-way connector at the hydraulic valve and/or at the 50-way connector. The bulletin describes the repair and parts necessary to add a service jumper harness to the existing harness.

CATEGORY 6 CLUTCH

TSB #	MODELS	SUBJECT/DESCRIPTION
06-01-94 8/12/94	'89 - '93 (AD) with manual transmission	*Transmission noise below 1400 rpm.* The bulletin describes a powertrain induced cyclic noise condition that appears to be transmission/driveline related. Especially noticeable in 4th and 5th gears, the noise occurs below 1400 rpm during coast or light throttle. The noise is not damaging to the powertrain and is due to the dampening characteristics of the clutch springs. The revision, if needed, involves replacement of the clutch disc.

CATEGORY 6 CLUTCH...*Continued*

06-01-90 A 12/31/90	'89 - '91 (AD) with manual transmission	*Transmission noise below 1400 rpm.* The bulletin describes a powertrain induced cyclic noise condition that appears to be transmission/driveline related. Especially noticeable in 4th and 5th gears, the noise occurs below 1400 rpm during coast or light throttle. The noise is not damaging or durability related. The diagnosis involves a road test to pinpoint the rpm at which the noise occurs. The revision involves a change of the flywheel.

CATEGORY 7 COOLING

TSB #	MODELS	SUBJECT/DESCRIPTION
07-04-94 4/8/94	'94 (BR)	*Service manual revision - thermostat seals.* Revised service manual pages showing t-stat seal pictures.
07-07-94 9/30/94	'94 - '95 (BR)	*Engine slow to warm-up in cold ambient temperatures.* The bulletin describes an overcooling condition caused by the thermostat being stuck in a partial open position. Gauge fluction is addressed and is considered normal with no action required. Owners are advised that the cooling system is large to provide capacity and protection for high temperatures and high GCWR ratings. Slower warm-ups are to be expected.
07-01-91 1/28/91	'89 - 90 (AD)	*Overheating or no heat condition.* An interference between the thermostat and cylinder head coolant passage on engines built before engine serial number 44465181 may result in a stuck t-stat in the open or closed position. A revised t-stat and coolant passage diameter check a part of the repair procedure.
07-04-91 9/23/91	'90 - '91 (AD)	*Lower radiator hose leakage.* Some leakage from the lower radiator hose at the waterpump connection may occur due to a step cast in the water pump nipple. The repair involves installing a second hose clamp.
07-05-91 12/16/91	'91 (AD)	*Fan belt noise/chirp.* The noise is caused by excessive paint in the grooves of the water pump allowing the belt to slip. Wire brush and solvent to remove the paint is the repair procedure.
07-03-90 12/21/90	All	*Recycled engine coolant.* The use of "reconstituted" antifreeze/coolants is not authorized in the performance of any repair covered under the provisions of warranty.
07-01-89 2/27/89	'88 - '89 with automatic transmission	*Auxiliary oil cooler freeze-up.* At ambient temperatures of -10°F or lower, trucks with auxiliary coolers (NHB) may loose transmission fluid due to a restriction of oil flow. A bypass line is the recommended repair.

CATEGORY 8 ELECTRICAL

TSB #	MODELS	SUBJECT/DESCRIPTION
08-25-95 6/9/95	'94 - '95 (BR)	*Power mirror vibration associated with installation of "bugscreen" deflectors.* The symptom is blurred images in the power mirrors. The diagnostic procedure - remove the bugscreen. If vibration ceases the mirrors are ok. Bugscreen deflectors are designed to disrupt airflow which can lead to mirror/antenna vibration.
08-24-95 9/30/95	'94 - '95 (BR)	*Accessory frame ground jumper wire.* The bulletin discusses a frame ground jumper wire from the battery negative to the frame bumper bracket be added if electrical accessories (winch, lights, snow plow, etc.) are added to the vehicle.

08-22-95 5/12/95	'94 - '96 (BR) '89 - '93 (AD)	*Installation of radio equipment.* The bulletin supersedes 08-31-94, 7/15/94 and discusses the proper installation of communication equipment in Chrysler vehicles.
08-16-95 A	'94 - '96 (BR) '89 - '93 (AD)	*Speed control - over/undershoot during set of speed selection.* The bulletin discusses the "adaptive strategy" that compensates for vehicle-to-vehicle variations in speed control cable lengths. Pressing the "set" button without pressure on the accelerator pedal can cause speed fluctuations. Proper review of the condition with vehicle operator is recommended.
08-05-94 1/20/94	'94 (BR)	*Poor AM radio reception.* Tighten the antenna base to 70 in/lbs to assure reception.
08-06-94 2/4/94	'94 (BR)	*Infinity radio (code RAY) looses sound on right channel speakers.* Infinity (RAY) cassette with equalizer system may loose the sound of right side speakers. RAS code radios are not affected. An exchange radio is the repair.
08-08-94 A 5/20/94	'94 (BR)	*Weak sounding horn.* The bulletin discusses an upgrade from a single horn to a dual horn system.
08-10-94 2/18/94	'94 (BR)	*Fuel gauge sticks.* The bulletin covers replacing the fuel pump module, if the fuel gauge intermittently sticks at full, with less than full capacity.
08-17-94 4/1/94	'94 (BR)	*Battery drain on vehicles equipped with trailer tow package.* Water may collect in the 7 pin trailer tow connector housing causing corrosion. Exterior or interior lights may erratically operate regardless of switch operation. Inspect the tow connector and notch the connector to allow for drain.
08-29-94 6/24/94	'94 (BR)	*Diesel secondary battery does not charge - vehicles built prior to 2/14/94.* Corrosion at battery clamp to secondary battery may prevent charging. Inspect, test, and replace battery clamp bolt if necessary.
08-33-94 7/15/94	'91 - '93 (AD)	*Fuel gauge inaccuracy.* If the fuel gauge reads inaccurately (too much reserve when the tank gauge reads empty), a revised fuel sending unit may be necessary.
08-41-94 8/5/94	'94 - '95 (BR)	*Trailer tow brake wire location.* An information only bulletin showing the wiring provisions for an electric brake actuator.
08-64-94 11/4/94	'94 - '95 (BR)	*Power mirror vibration.* On vehicles equipped with power mirrors built prior to 9/18/94 this TSB discusses the diagnosis and repair for excessive vibration/blurred images.
08-65-94 11/4/94	'94 (BR)	*Poor AM radio reception.* On vehicles built prior to 12/01/93 poor AM reception can be repaired by replacement of the antenna base and cable assembly.
08-05-93 2/8/93	'93 (AD)	*White smoke at start-up.* Service changes to the powertrain control module (SEBC) may cause white smoke at start-up. The SEBC is programmed to eliminate operation of the air intake heater for the first 25 vehicle starts. After service or in predelivery situations, there may be vehicles that have not accumulated 25 starts. The white smoke condition should be resolved after 25 starts are accumulated.
08-07-93 A 3/19/93	'92 - '93 (AD) with four wheel drive	*Speed control surge.* The bulletin describes the correct speed control servo and cable match for the powertrain control module. Verify compatability of components. Replace speedometer drive gear, if necessary.

CATEGORY 8 ELECTRICAL...*Continued*

08-45-93 10/8/93	'94 (BR)	*Radio lock-up.* The bulletin applies to AM/FM Stereo (RAL) or AM/FM stereo cassette (RAS) radios. If the buttons and controls do not function the condition is caused by a programming error. The condition is corrected by following the operational sequence outlined in the TSB.
08-47-93 10/15/93	'94 (BR)	*Erratic coolant temperature gauge reading.* The cooling system on the Cummins diesel engine equipped vehicles provide for capacity and protection at high GCWR. THe large capacity can cause slower than normal warm-up. Also temperature gauge reading fluctuations are normal.
08-58-93 12/10/93	'91 - '93 (AD)	*Fuel gauge innaccuracy.* Too much reserve fuel in the tank when the gauge indicates empty may be the fault of an incorrect sending unit. The repair involves a wiring harness and sending unit change.
08-67-93 12/31/93	'94 (BR)	*Service procedure for the stop light switch connector.* An information only bulletin showing the disconnect procedure of the stop light switch.
08-05-91 4/22/91	All trucks	*Trailer tow wiring installation.* The information only bulletin gives guidelines for proper wiring of trailer tow wiring packages.
08-10-91 9/9/91	'89 - '91 (AD)	*Speedometer reading fluctuates and/or the speed control disengages.* The condition may be caused by spread female connectors at the 2-way distance sensor connector. Inspect and replace as necessary.
08-11-91 10/7/91	'91 (AD)	*Fuel reads low when fuel tank is full.* If fuel gauge does not read full after filling the fuel tank, the problem may be an incorrectly calibrated fuel sealing unit. Repair and replace as necessary.

CATEGORY 9 ENGINE

TSB #	MODELS	SUBJECT/DESCRIPTION
09-10-95 6/2/95	'94 - '95 (BR)	*Diagnosing oil consumption.* The concern is an operator report of greater than one quart per one thousand miles. Variations in oil level are likely possible if the oil check is performed on a warm engine due to slow drain back from the inline fuel pump. Discuss with customer and assure dipstick is updated to part number 4796874. The correct dipstick increases the safe zone to two quarts versus the early '94 vintage dipsticks with only a one quart safe zone.
09-04-95 4/14/95	'94 - '95 (BR)	*Excessive oil drainage from oil draft (breather) tube.* The bulletin applies only to engines built prior to 12/1/94. It involves replacing the tappet cover with a new sealed version.
09-06-94 4/22/94	'94 (BR)	*Cummins exhaust manifold gaskets.* Service gaskets and production gaskets can vary in thickness. Do not intermix. If an exhaust gasket requires replacement, then replace all six.
09-22-93 12/31/93	'94 (BR)	*Service manual revision for Cummins piston grading procedure.* The information only bulletin details the pistons to be used if engine rebuild is necessary.
09-07-91 12/2/91	'91 - '92 (AD)	*Cylinder head bolt torque tightening procedure.* The information only bulletin describes the bolt tightening procedure for cylinder head bolts.
09-11-89 7/3/89	'89 (AD) with automatic transmission	*Knocking noise at rear of engine due to a cracked torque converter drive plate.* On trucks built prior to 2/8/89 if there exist a knocking or grinding noise at the rear of the engine check, the torque converter drive plate for cracking. Replace as necessary.

CATEGORY 11 EXHAUST

TSB #	MODELS	SUBJECT/DESCRIPTION
11-03-94 5/13/94	'94 (BR)	*Diesel exhaust stains.* The bulletin applies to 5-speed trucks built prior to 2/1/94 and automatic trucks between 2/1//94 and 10/1/94. The condition is exhaust soot on the side of the truck. A tail pipe extension is the part needed to remedy the situation.
11-02-92 7/27/92	'88 - '92 (AD)	*Rear tailpipe support bracket cracking.* The condition is a rattle noise caused by a crack or break in the rear tailpipe support bracket area. A revised tailpipe support bracket (5 2018458) is the part used for repair.

CATEGORY 14 FUEL

TSB #	MODELS	SUBJECT/DESCRIPTION
14-05-94 4/8/94	'94 (BR) '89 - '93 (AD)	*Use of low sulfur fuel.* The bulletin discusses the new for 1994 low sulfur fuel. Fuel lubricity concerns are addressed as the use of diesel fuel additives to increase the lubricity of low sulfur fuel are not required.
14-15-93	'89 - '93 (AD)	*Fuel leakage from the roll-over valve vent.* The bulletin warns that repeated attempts to force fuel into the tank after the automatic shut off has engaged may lead to a condition where the fuel level in the tank is above the designed operating level. Fuel may leak out of the roll over valve in this situation. The repair involves raising the roll over vent location by installing fuel hose to the vent nipple and routing to a high location along the filler tube.
14-02-90 12/3/90	'89 - '90 (AD)	*Accelerator pedal effort too high.* The bulletin describes the installation of revised parts to lessen the pedal effort. If the truck has a Mopar aftermarket speed control kit, the kit already has the revised parts.
14-01-89 10/2/89	'89 (AD)	*Injection pump diagnosis procedure.* A troubleshooting procedure is outlined to help diagnose diesel engine problems.

CATEGORY 16 PROPELLER SHAFTS & U-JOINTS

TSB #	MODELS	SUBJECT/DESCRIPTION
16-02-95 11/3/95	'94 - '95 (BR) automatic transmission trucks	*Droaning noise/vibration.* The symptom/condition is a droaning type noise and/or vibration felt in seat track, floor pan or steering column. The noise is worst case when pulling a camper or trailer with significant wind drag. Peak noise level is 1900 rpm for 4x2 trucks 1850 rpm on 4x4 models with torque converter clutch engaged. The repair involves replacement of the propeller shaft.
16-01-94 10/14/94	'94 - '95 (BR)	*Shudder at start on vehicles with two piece driveshafts operated at near maximum GVW.* The symptom is a driveline shudder when pulling away from a stop. As the vehicle is loaded, the driveline angle will change. In the case of maximum GVW, the rear differential may rise above the rear driveshaft center bearing. The alignment could cause a shudder in the driveline. The repair involves replacement of the driveshaft center support bearing bracket and/or driveshaft.

CATEGORY 18 VEHICLE PERFORMANCE

TSB #	MODELS	SUBJECT/DESCRIPTION
18-29-95 A 10/16/95	'94 - 95 (BR) with automatic transmission	*Diesel low power/performance specs.* The bulletin applies to automatic transmission trucks with a customer complaint of slow acceleration or low power. Performance tests (0-60) are performed and an acceleration table to reference is provided. The bulletin guides the dealership through a series of trouble shooting tests to troubleshoot the low power complaint. Checks for wide open throttle, a low pressure fuel system check, and finally, an injection pump timing adjustment are described.
18-01-94 1/14/94	'94 (BR) with automatic transmission	*Lack of power/harsh transmission shifts.* The bulletin applies to vehicles built before 10/28/93 and involves the replacement of the throttle control lever to ensure full throttle travel. Also, adjustment of the throttle position sensor is described.
18-10-94 A 7/29/94	'94 (BR)	*Excessive White Smoke/Low Power.* The bulletin involves a diagnostic check of the cooling system and starting instructions before verifying timing of the engine. Manual transmission engines are set to 12.5 degrees top dead center. Automatic engines should be set according to the engine data plate.
18-05-93 4/30/93	'91 - '93 (AD)	*Poor performance/lack of power.* The bulletin discusses the troubleshooting procedures for a poor performance complaint. After verification of engine system performance, the bulletin outlines the criteria for a torque converter stall test for automatic equipped trucks and a 20-50 mph test for manual transmission trucks. An adjustment procedure for the LDA (a timing advance that is controlled by boost pressure) is described. The bulletin is known as the "starwheel" or "balloon test" by service technicians.
18-06-92 A 7/23/93	'91 - '93 (AD) with automatic transmission	*Erratic 3-4 or 4-3 shifts.* The bulletin discusses erratic shifting (hunting) between third and fourth gear. The shift schedule is based on several inputs to the powertrain control module (SEBC). Diagnosis of the components is described. If a throttle position sensor is required the replacement part number is 4746966.
18-05-92 6/15/92	'92 (AD)	*Vehicle surging when cruise control is engaged.* The condition may be caused by the calibration of the powertrain control module (SEBC). Replacement of the SEBC is covered in the repair procedure.
18-06-92 6/29/92	'91 - '92 (AD)	*Lack of power, poor acceleration in cold ambient temperatures.* Below 33°F some vehicles may be slow to accelerate or feel low on power. The condition may be caused by ice forming at the fuel intake area of the fuel gauge sending unit module. A revised module part number and repair procedure are outlined.
18-10-92 A 9/8/92	'91 - '92 (AD) with automatic transmission	*Erratic 3-4 or 4-3 shifter.* Note: See TSB 18-06-93 A
18-11-92 7/13/92	'91 - '92 (AD)	*Poor performance/lack of power.* Note: See TSB 18-05-93
18-17-92 9/8/92	'91 (AD)	*Engine rpm fluctuates when the cruise control is engaged.* This bulletin is for non-intercooled (build date prior to 1/1/91) trucks. The bulletin involves replacing the vehicle speed control module with a recalibrated module.
18-18-92 10/19/92	'91 - '92 (AD)	*Poor engine performance/erratic engine operation/transmission operation.* Some vehicles may exhibit the above characteristics as well as transmission hunting. Corrosion or spreading of the female terminals in the 3-way throttle position sensor connector could be the problem. Diagnosis and repair as necessary.
18-15-92	'91 (AD)	*White smoke at start-up.* At cold ambient conditions white smoke can be a condition. This bulletin applies to trucks built after 1/1/91. The repair involves replacing the air temperature sensor. If the engine serial number is higher than 44623028 the sensor is of the new design.

CATEGORY 19 STEERING

TSB #	MODELS	SUBJECT/DESCRIPTION
19-02-05 B 11/3/95	'94 - '95 (BR) trucks with a build date prior to 1/1/95	*Clunk or rattle felt in steering wheel/column over rough surfaces or while making a turn.* The repair involves performing an inspection of suspension and steering components to assure proper torque. The replacement of the steering column intermediate shaft is described.
19-01-94 1/28/94	'94 (BR) 4x4	*Slow steering return.* The bulletin applies to 4x4 trucks with a Dana 60 axle. The diagnosis involves using a spring scale to determine turning force. The repair involves performing a ball joint tightening.
19-04-94 6/3/94	'94 (BR)	*Low power assist in cold ambient temperatures.* The condition can be minimized by reviewing the cold start procedures. Cold climate power steering fluid (pn 04778524) may be used.
19-03-93 4/16/93	'89 - '93 (AD)	*Steering Column coupler.* A repair package with a revised boot has been developed to service the steering coupler. The part number is 4740761. This is an information only bulletin.
19-02-91 4/22/91	'89 - '91 (AD) with four wheel drive	*Steering wheel off-center.* Due to a shift in the steering gear bracket in high load conditions, the steering wheel may be off center during straight driving. The repair involves installing a shoulder bolt that acts as a dowel pin locking the steering gear bracket to the frame.

CATEGORY 21 TRANSMISSION

TSB #	MODELS	SUBJECT/DESCRIPTION
21-02-95 3/31/95	'95 (BR) built after 3/20/95	*Quick connect removal and reconnect procedure.* The bulletin is an "information only" bulletin outlining two ways to disconnect the quick connectors of the automatic transmission lines.
21-03-95 A 6/16/95	'94 - '95 (BR)	*Automatic transmission cold temperature cooler bypass kit.* The condition occurs at ambient temperatures of -15°F or below. Vehicles equipped with automatic transmission coolers may experience a lack of fluid flow to the transmission due to restricted cooler lines. In periods of extended driving transmission failure may result. The bulletin describes the installation of a cold weather transmission cooler by-pass kit. Caution is needed as the kit decreases the cooling capacity of the transmission when driving in hot ambient temperatures, and is not recommended.
21-04-95 4/14/95	'94 - '95 (BR) trucks with automatic transmission	*Vibration or perceived engine miss.* The symtom is a vibration or perceived engine miss at approximately 1100 rpm as the torque converter clutch engages. The condition occurs in fourth gear lock-up at speeds between 42 to 48 mph. Depending on year model the powertrain control module is either replaced or reprogramed.
21-05-95 A 1/5/96	'94 - '95 (BR) trucks with automatic transmission	*Delayed transmission engagement/torque convertor drainback.* The condition is delayed transmission engagement of 2 to 8 seconds at initial start-up. The problem is most noticeable after the vehicle has been parked for an extended period. The bulletin describes the installation of transmission lines with a one-way drainback valve.
21-08-95 1/30/95	'94 - '95 (BR)	*Speed sensor oil seepage.* The bulletin describes how oil seepage can occur in the speed sensor area. The repair is the installation of a speedometer adapter.
21-09-95 6/30/95	'94 - '95 (BR) trucks with manual transmission	*Servicing of 5th gear mainshaft nut on NV 4500 manual transmission.* The information only bulletin describes the replacement of the 5th gear main-shaft nut with a new nut if the original nut has to be removed. Under no circumstances is the original part to be reused. Special Mopar lock seal should be applied to the threads at reassembly.

CATEGORY 21 TRANSMISSION...*Continued*

21-11-95 7/7/95	'96 (BR) trucks with automatic transmission	*Overdrive unavailable in extreme cold temperatures.* The information only bulletin emphasizes a change to the PCM for 1996. For '96 in ammbient temperatures of -5°F and below the PCM inhibits the transmission from shifting into overdrive. This protects the transmission from damage if the fluid would begin to freeze. The PCM will allow overdrive once the ambient temperature has risen approximately 7° above the temperature the ID was inhibited at.
21-04-94 3/4/94	'94 (BR) with manual transmission NV 4500 HD	*Transmission shift lever stuck in or blocked out of 5th gear/reverse.* The shift lever does not shift out of 5th or reverse gear position, or the shift lever will not go into 5th/reverse. Diagnose the transmission and, if necessary, replace the transmission overdrive rail, lug shift fork, and synchronizer.
21-10-94 5/27/94	'94 (BR) with manual transmission NV 4500 HD	*Shift lever contacts instrument panel.* Inspect the shift lever to transmission stub shaft connection. Reseat the lever to the stub shaft if necessary.
21-17-94 9/16/94	'94 (BR) '93 (AD) with automatic transmission	*Transmission diagnostic reference supplement.* To assist in the repair of automatic transmission, the information only bulletin, lists symptom/cause/correction information.
21-18-94 9/30/94	'94 (BR), '89 - '93 (AD) with automatic trans.	*Transmission 4-3 downshift clunk.* A driveline clunk or harshness occurs during 4-3 coast downshift repair as described in bulletin.
21-24-94 12/2/94	'94 - '95 (BR) with automatic trans.	*Shift linkage adjustment.* The information only bulletin explains how to correct a PRNUL misalignment.
21-25-94 12/23/94	'94 - '94 (BR) with NP 241 HD transfer case	*High effort when shifting from 2WD high to 4WD high in cold temperatures.* If high effort condition occurs when shifting the transfer case in cold temperatures, the bulletin describes the repair. The procedure involves a change in the front axle lubricant or possibly a parts component replacement.
21-23-93 9/3/93	'92 - '93 (AD) with automatic transmission	*Lack of 3/4 up-shift and deep throttle 2/4 up-shift.* A complaint of lack of 3/4 up-shift at 50 to 60 mph on the '92 MY trucks or complaint of deep throttle 2/4 up-shift on late built '92 and '93 models could be related to the overdrive shift calibration. Using the DRB scan tool verify the engine and transmission systems are functioning properly. The powertrain control module (SEBC) may require replacement to updated part number 4746568.
21-39-93 12/31/93	'89 - '93 (AD) with automatic transmission	*Four speed automatic transmission 4-3 downshift clunk.* The bulletin describes a clunk or harshness during 4-3 coast downshift at approximately 18-20 mph. Verify all engine and transmission systems are functioning properly. Repair as required.
21-18-92 11/30/92	'92 - '93 (AD) with automatic transmission	*Delayed up-shifts and harsh engagement into drive or reverse.* The bulletin describes a repair involving adjustment of the throttle valve cable and replacement of the return spring.
21-11-91	'89 - '91 (AD) with A 518 automatic transmission	*3-4 up-shift noise with A 518 transmission.* A noise or rattle during 3-4 up-shift or down-shift may be the result of an overdrive clutch pack vibration. Diagnose the vehicle to confirm condition and repair as necessary.
21-05-90 2/26/90	'89 - '90 (AD) with manual transmission	*Replacement of transmission shift lever and stubshifter.* The shift lever and stub shifter are available as separate replacement parts. If replacement is required, use the component parts - do not replace the transmission assembly.
21-14-90 5/7/90	'90 (AD) with 518 automatic transmission	*Low/reverse band wear.* Premature wear of the low/reverse band may be the result of one of the overdrive transmission mounting bolts making light contact with the band strut resulting in incomplete release of the band. A washer is installed to prevent contact.
21-12-89 5/1/89	'89 (AD) with manual transmission	*Speedometer drive gear replacement procedure.* An information only brochure to supplement the service manual.

CATEGORY 22 WHEELS & TIRES

TSB #	MODELS	SUBJECT/DESCRIPTION
22-03-95 3/3/95	'95 (BR)	*Match mounted tire/wheel combinations.* The bulletin is an "information only" bulletin describing a match mounting process to improve ride characteristics.
22-04-95 4/7/95	'94 - '95 (BR)	*Spare tire winch operation.* The bulletin is an "information only" bulletin reminding not to use power tools to drive the spare tire winch.
22-05-95 A 6/30/95	'94 - '95 (BR) with code WDC wheels	*Wheel runout measurement code WDC wheels procedures.* The bulletin gives the allowable remount and informs the dealer that the tire must be dismounted to correctly measure radial and lateral runout.
22-06-95 6/16/95	'95 (BR)	*Match mounting during wheel service.* The information only bulletin helps dealers match mount wheels and tires. Premature rust on chrome wheels.
22-03-94 6/24/94	'94 (BR)	*Wheels manufactured after 1/1/94 have an improved chrome plating process. Wheels prior to 1/1/94 may show signs of premature rust.* Replacement of the wheels is described.
22-05-93 7/16/93	'93 (AD)	*Tire and wheel runout.* A quick reference chart is provided for dealer diagnosing.
22-02-92 4/6/92	'89 - '92 (AD)	*Wheel vibration on 350 Series trucks with flange type lug nuts.* Wheel/tire vibration may be caused by the wheels being off center on the wheel studs. The repair involves a wheel centering procedure using two 90° cone nuts.

CATEGORY 23 BODY

TSB #	MODELS	SUBJECT/DESCRIPTION
23-04-95 2/10/95	'94 - '95 (BR)	*Rattle due to seat belt latch plate bumping trim.* The symptom is a noise due to the seat belt latch bumping against the trim when the belt is not in use. The repair involves the addition of a sound deadener pad to the trim panel.
23-29-95 6/9/95	'94 - '95 (BR)	*Cracked sunvisor support bracket/retainer.* The bulletin involves the replacement of the visor bracket with a revised bracket.
23-43-95 6/14/95	'94 - '95 (BR)	*Door operation not smooth or feels loose.* Visually inspect the door hinge area. If the door hinge bushing has fallen out the bushing should be reinstalled and crimped to prevent reccurance.
23-52-95 A	'94 - '95 (BR) Standard cab only	*Creaking noise or exterior noise from back of cab.* The condition is a sheet metal creaking or exterior noise from the back of the cab caused by verticle or horizontal cracks in cab back. Using a hoist and a strong light, look for cracks on lower portion of cab. If cracks are noted four cab reinforcements and replacement cab isolators should be installed.
23-74-95 12/8/95	'95 -'96 (BR)	*Interior film build-up on windows.* Window film build-up is caused by vinyl interior trim material releasing gasses that adhere to the glass. The condition lessens as the vehicle gets older.
23-08-94 1/28/94	'94 (BR)	*Wind noise at front of door.* Inspect the vehicle for the appropriate seal. If not present, perform the repair/installation procedure.
23-32-94 4/1/94	'94 (BR)	*Door fit at roof line.* The top of the door should project higher than the roof panel. Do not attempt a repair if the door falls within the overflush 1-3 mm condition.

23-36-94 4/22/94	'94 (BR)	*Front door to windshield moulding squeak/creak.* A noise from the front of door/plastic windshield moulding can occur. The correction is to install anti-friction tape to the inside edge of the doors.
23-39-94 5/6/94	'94 (BR)	*Pickup box floor rattle.* The bulletin involves applying sealer to the pickup box floor at the crossmember.
23-40-94 A 5/6/94	'94 (BR)	*Door glass rattle.* If the door glass rattles when the door is closed and the window is open the bulletin describes the diagnosis and repair of the weather strips.
23-41-94 5/13/94	'94 (BR)	*Creak noise from instrument panel bezel.* If a creaking noise occurs, coming from the instrument panel bezel, add felt tape to dash to dampen/isolate the components.
23-45-94 6/3/94	'94 (BR)	*Snapping noise at right side of instrument panel.* A snapping noise (sounds like a small stone hitting the window) may occur. If diagnosed, add a pad to the stiffening rib of the instrument panel to isolate the components.
23-49-94 7/1/94	'94 (BR)	*Warped tailgate.* Vehicles built at the Warren truck assembly plant (Dodge City complex) between 1/10/94 and 2/15/94 are suspect. Inspect as tailgate may be twisted or warped on the right side. Check the "run number" for date of production. Check the last three digits as 02X through 05X are suspect. Replace as necessary.
23-51-94 7/1/94	'94 (BR)	*Tailgate rattle.* If a tailgate rattle is heard, inspect the tailgate pivot bracket. Repair as described in bulletin with replacement stud and bearing mount.
23-60-94 8/12/94	'94 (BR)	*Popping or snapping noise from windshield.* The condition is a noise from the base of the windshield while traveling over rough roads/irregular surfaces. The repair involves removing windshield spacers at the base of the windshield.
23-63-94 8/26/94	'89 - '93 (AD)	*Cowl cracks.* The condition is cracking or popping sounds from the cowl area at the lower corners of the windshield. Inspect the area underneath the fender at the cowl welds. The fenders must be removed to see the cracks. The repair involves installing cowl reinforcement brackets to the cowl.
23-68-94 9/30/94	'94 - '95 (BR)	*Glue seeps out at backlight or windshield moulding.* Hot melt glue (clear to light brown) can seep out at the edge of the light or molding. The repair is to clean the glue with Mopar Concentrated Windshield Washer Solvent.
23-71-94 10/7/94	'95 (BR)	*Tailgate latch handle loose.* The bulletin applies to vehicles built from 8/30/94 to 9/8/94. The hole in the tailgate was stamped oversize. Inspect the latch handle and apply Mopar Bond-All Gel Adhesive to correct.
23-73-94 10/7/94	'94 (BR)	*Cup holder rattle.* If cup holder rattles in the closed position, add a foam block to the back of the mug holder.
23-95-94 A 12/30/94	'94 - '95 (BR)	*Front seat cover wear through above the recliner pivot.* The condition is wear-through at the recliner pivot. Inspect as directed and repair if necessary.
23-98-94 12/23/94	'94 (BR)	*Tailgate hard to latch in cold temperatures.* If the tailgate is difficult to latch when ambient temperatures are below freezing, the strikers should be checked for proper adjustment. If the problem persist, replace the caliper stop with a shorter one, part number 55075773.

CATEGORY 23 BODY...*Continued*

23-101-94 12/30/94	'94 - '95 (BR)	*Anti-friction tape on A-pillar.* Bulletin 23-36-94 described a squeak and paint abrasion at the door to windshield A-pillar area. Anti-friction tape is now being applied at the assembly plants to prevent the problem. Do not remove the anti-friction tape.
23-57-93 10/8/93	'94 (BR)	*Instrument panel creak.* A creak or squeak may be present on the left side of the instrument panel. The repair involves loosening of the instrument panel to provide additional clearance between the cowl side panel and instrument panel support joint.
23-64-93 11/19/93	'94 (BR)	*Tailgate rattles.* If tailgate rattles over bumps, check for looseness. If tailgate does not close tightly, replace the overslam and alignment bumpers.
23-21-92 9/8/92	'93 (AD)	*'93 standard paint colors.*
23-09-91 8/26/91	'92 (AD)	*'92 standard paint colors.*
23-12-90 10/8/90	'91 (AD)	*'91 standard paint colors.*
23-24-89 10/10/89	'90 (AD)	*'90 standard paint colors.*
23-08-89 4/10/89	'89 (AD)	*'89 standard paint colors.*

CATEGORY 24 AIR CONDITIONING

TSB #	MODELS	SUBJECT/DESCRIPTION
24-01-95 A 3/3/95	'89 - '94 (AD)	*R-12 to R-134a refigerant adaptation procedure.* The bulletin describes the conversion from R-12 to R-134a. The procedure should only be performed on vehicles when R-12 is no longer available.
24-06-95 A 5/26/95	'94 - '95 (BR)	*Odor from air conditioning ducts.* Some vehicles may emit a "musty" odor from the airconditioning ducts. The odor is most noticable when the A/C system is first turned on. Two possible causes are discussed and repair procedure are outlined based on less than or greater than 12 months in service.
24-08-95 5/19/95	'94 - '95 (BR)	*White flakes from instrument panel outlet.* Sodium silicate is used to coat the air conditioner evaporator for corrosion protection. If excessive amounts are applied during the manufacturing process, there is a tendency for the extra coating to flake off. Flakes may blow from the vents when the fan is turned on. The bulletin is issued for information only.
24-08-94 5/6/94	'94 (BR)	*A/C evaporator odor.* A "musty" odor may be emitted from the air conditioner ducts. The odor is most noticeable when the A/C is first turned on after the system has been left off evernight or longer. The odor is a result of foreign material accumulating in the evaporator area. The bulletin involves cleaning and disinfecting the A/C evaporator and housing.

CATEGORY 24 AIR CONDITIONING...*Continued*

24-17-94 '91 - '93 (AD)
11/18/94 '94 - '95 (BR)

A/C evaporation freeze-up or lack of cooling on cycling clutch of air conditioning system.
Loss of A/C airflow and/or cooling while the blower fan continues to operate may occur. This bulletin discusses the role of the powertrain control module in the A/C system.

The electrical signal from the A/C cycling clutch switch passes through the Powertrain Control Module (PCM) to engage and disengage the A/C clutch relay. If the PCM is not properly disengaging the A/C clutch via the relay, the compressor will stay on continuously and result in evaporator freeze-up. Also, the PCM may not energize the A/C clutch relay at all. THis condition results in the lack of cooling from the A/C system.

The PCM should be checked per the procedure in the appropriate Powertrain Diagnostic Procedure Manual. Diagnostic Trouble Code 33 (A/C clutch relay circuit) will be present when either of these conditions are caused by the PCM. It is important to perform the complete test sequence because there are other A.C clutch relay circuit components that could also cause or contribute to the condition.

24-27-93 '91 -'93 (AD)
11/19/93 '94 BR

Air conditioner compressor noise.
A growling noise may be heard with the compressor running. Diagnose the condition as outlined and perform the repair procedure if necessary. The repair involves installing a revised compressor valve plate assembly.

CATEGORY 26 MISCELLANEOUS

TSB #	MODELS	SUBJECT/DESCRIPTION
26-04-94 10/28/94	All	*Diagnostic procedure manuals.* The bulletin gives a current list of available diagnostic procedure manuals. These manuals provide system information, step-by-step trouble shooting procedures, diagnostic and driveability tests, along with diagrams, illustrations and helpful charts to find and fix problems on Chrysler Corporation vehicles. These manuals can be ordered by calling 1-800-626-1523.

TSB's Issued During '96

CATEGORY 2 FRONT SUSPENSION

TSB#	MODELS	SUBJECT/DESCRIPTION
02-01-96A 5/31/96	'94-'96 (BR)	*Camper Special service kit.* The bulletin supersedes TSB 02-01-96 dated 3/15/96. The bulletin applies to body style codes 31, 32, and 62 with one of the listed GVW sales codes Z2B, Z3A, Z7B, Z8A or Z8B. The bulletin describes the parts and installation procedure for a special service kit developed for use by owners that consistently carry a box mounted camper. A rear stabilizer bar and auxiliary spring comprise the kit.
02-03-96 5/31/96	'94-'96 (BR)	*Creaking noise from rear of vehicle.* The diagnosis involves the inspection of the rear leaf spring assembly to verify the appropriate number of spring tip inserts are present. If tip inserts are broken or missing the repair procedure is detailed in the TSB.
02-04-96 6/21/96	'94-'96 (BR) Two wheel drive (2WD)	*Lower ball joint replacement.* This bulletin applies only to two wheel drive vehicles. It discusses the service differences in tack welded ball joints/control arms and non tack welded ball joints/control arms.
02-06-96 11/29/96	'94-'97 (BR) 4x4 only	*Track bar ball joint diagnosis.* The bulletin refers to the '97 Truck Service Manual and is a supplement to help the technician troubleshoot loose or worn steering components. The track bar ball joint previously did not have an inspection procedure.

CATEGORY 3 REAR AXLE

TSB#	MODELS	SUBJECT/DESCRIPTION
03-02-96 5/10/96	'94-'96 (BR) 2500 and 3500 4x2 trucks, regular cab, automatic transmission and two-piece propeller shafts.	*Shudder when pulling away from stop when operated at maximum GVW rating.* The bulletin is a supersession of bulletin 16-01-94. If the vehicle exhibits a driveline shudder while pulling away from a stop at maximum GVW rating, the bulletin describes the replacement of the two-piece driveline and center support bracket with a single piece assembly.
03-03-96 8/16/96	'94-'96 (BR) With automatic transmission and 5.9 Turbo Diesel engine. Note: '96 2500 club cab, 155 WB 4x4 with heavy duty transfer case built after 5/9/96 have the revised propeller shaft.	*Droaning noise/vibration.* The symptom typically occurs at maximum load and is engine speed specific - 1900 rpm for 4x2 models, 1850 rpm for 4x4 models with the truck in fourth gear and the torque converter clutch locked up. If the problem is identified, a repair procedure involving a revised propeller shaft with a yoke weight damper is described.

CATEGORY 5 BRAKES

TSB#	MODELS	SUBJECT/DESCRIPTION
05-14-95 A 2/9/96	'95 - '96 (BR)	*Brake pedal noise when depressed.* The symptom is a squawk type noise when the brakes are depressed. The repair involves installing a revised back-up plate into the brake combination valve.
05-02-96 A 11/15/96	'94-'97 (BR) 2500, 8800 GVW - sales code and 3500 built before 8/5/96	*Accelerated brake lining wear, front versus rear.* The bulletin supersedes TSB 05-02-96 dated 2/23/96. The bulletin adds the 3500 series truck and incorporates the use of revised brake linings. The bulletin discusses wear conditions. The repair procedure involves replacing possibly the front brake linings, rear brake linings, or rear wheel cylinders, depending on truck model and vehicle sales code.
05-08-96 9/13/96	'94-'96 (BR)	*Brake pedal rattle.* If a rattle is heard coming from the brake pedal area and is eliminated when pressure is applied to the side of the brake pedal, a repair procedure involving a "wave washer" is outlined.
05-09-96 10/4/96	All	*Brake noise.* The information only bulletin describes the normal noises that may occur with a properly operating system, ABS self check, trace squeak, grinding, groaning etc., noises are discussed.
05-10-96 12/13/96	'94-'97 (BR)	*Chassis dynamics diagnosis.* The bulletin discusses conditions where-by the vehicle may move to the right or left when not controlled by the driver. Several causes are cited (aftermarket wheels, road crown, cross winds, incorrect tire pressures, worn wheel bearings, etc.). Diagnosis involves testing the vehicle to determine if the drift is brake related. A brake system evaluation is outlined. Steering and suspension inspection is discussed. Suspension torque values for fasteners are discussed. A suspension geometry evaluation is outlined. Front end alignment specifications are provided. Wheel shim kits and installation of shims for 4x4 trucks is discussed.

CATEGORY 8 ELECTRICAL

TSB#	MODELS	SUBJECT/DESCRIPTION
08-20-96 7/19/96	'96-'97 (BR)	*Cassette auto load error on RAS code radio.* This information only bulletin describes a condition where the radio may enter the cassette play mode without a cassette being inserted. The bulletin explains the correction and discusses the function of the Ignition Off Draw (IOD) fuse.
08-21-96A 10/18/96	'96 (BR)	*Wiring harness connector repair packages.* This information only bulletin helps the service technician by providing a part number listing for the correct electrical components per an assembly. It also gives a review of the diagnosis procedure for electrical components.
08-23-96 8/23/96	'94-'96 (BR) built prior to 12/15/96	*Clicking noise from speedometer.* If a clicking/ticking noise is heard coming from the instrument cluster area, the bulletin describes the repair procedure to replace the speedometer.
08-33-96 10/11/96	'94-'97 (BR)	*Trailer tow wiring information.* Chrysler Corporation has offered optional trailer tow packages on all '94 through '97 Dodge Ram Trucks and has made trailer tow packages available through Mopar for vehicles that were not built with the trailer tow package. Several changes to the trailer tow wiring have occurred since the truck was introduced. It also identifies flashers. This bulletin identifies the part numbers for the Mopar trailer tow packages required to adapt trailer wiring to a vehicle that did not have the trailer tow package installed as original equipment from the factory.
08-47-96 12/20/96	'97 (BR)	*Radio interference from buzzer module.* The condition is a buzzing noise in the rear radio speakers with the radio on/ignition on and the door ajar. If a buzzing noise is heard the repair involves replacing the buzzer module.

CATEGORY 9 ENGINE

TSB#	MODELS	SUBJECT/DESCRIPTION
09-07-96 6/7/96	'94-'95 (BR)	*Fuel injection pump oil supply bushing oil seepage.* If oil seepage is diagnosed, the bulletin describes the repair procedure using a special oil supply and removal tool.

CATEGORY 11 EXHAUST

TSB#	MODELS	SUBJECT/DESCRIPTION
11-05-96 8/23/96	'94-'97 (BR)	*Diesel turbocharger diagnostic procedure.* This information only bulletin guides the service technician thorough troubleshooting steps to properly diagnosis turbocharger situations. Normal/abnormal noises, oil leakage, acceleration and low boost, are topics discussed in the bulletin.

CATEGORY 14 FUEL

TSB#	MODELS	SUBJECT/DESCRIPTION
14-07-96 8/2/96	'94-'96 (BR)	*Low pressure fuel system diagnostic procedures.* Too low a fuel supply to the Bosch P7100 fuel pump can affect performance. Low rpm miss/instability, white smoke, hard starting, low power may be the result. This bulletin gives the technician additional information to assist in diagnosis of the above problems.

CATEGORY 18 VEHICLE PERFORMANCE

TSB#	MODELS	SUBJECT/DESCRIPTION
18-11-96 3/22/96	'96 (BR)	*Revised injection pump timing specifications.* A revision in the injection pump timing specification on Cummins engines with a CPL 2022 or 2023 should be utilized when checking or performing injection pump timing.

CATEGORY 19 STEERING

TSB#	MODELS	SUBJECT/DESCRIPTION
19-01-96 2/9/96	'95-'96 (BR)	*Clunk or rattle felt in steering column/wheel.* The condition is a clunk or rattle in the steering wheel/column during slow turns or stops on some '95-'96 trucks. Diagnosis includes a check of all fasteners for the appropriate torque value.
19-05-96 8/30/96	'94-'96 (BR) 4x4 trucks with sales codes Z8A and Z8B and 4x2 cab chassis (Z3B) built before 5/15/96.	*Shimmy after striking a bump or pothole.* This bulletin supersedes TSB 19-04-95 (5/12/95). The bulletin discusses a sustaining vibration (shimmy) felt in the front end of the vehicle after striking a bump or pothole. The repair procedure involves replacing the steering damper, replacing the track bar (if necessary) and the addition of an auxiliary steering damper.

CATEGORY 19 STEERING

TSB#	MODELS	SUBJECT/DESCRIPTION
21-04-96 3/15/96	'96 (BR)	*Transmission will not upshift following a 3-2 downshift.* Under certain conditions the transmission will not upshift following a 3-2 downshift. In this condition, the engine will continue to operate at maximum governor speed in second gear until the throttle is reduced. The condition only occurs if the overdrive is "off." The repair involves reprogramming the powertrain control module with new software.
21-13-96 9/20/96	'96 (BR) 4x4	*Transfer case shifter buzz or clatter.* A buzz or clatter may be heard from the 4x4 shifter at an engine speed of approximately 2000 rpm. The repair involves the addition of an insulating plastic gate liner to the transfer case shifter.
21-15-96 11/8/96	'95-'97 (BR)	*Quick connect removal and reconnect procedure.* The information only bulletin describes the repair procedure for removal/reconnect of the transmission cooler line fitting on trucks built after 3/20/95 and superseded bulletin 21-02-95, 3/31/95.

CATEGORY 23 BODY

TSB#	MODELS	SUBJECT/DESCRIPTION
23-01-96 1/5/96	'94-'96 (BR)	*Replacement cargo box information.* This information bulletin list the revised part numbers for the 6.5 ft. and 8.0 ft. cargo box with a reinforced front box floor.
23-02-96 1/19/96	'94-'96 (BR)	*Creak or tick noise from right side instrument panel.* The noise can be reproduced by pushing on the instrument panel at the shelf above the glove box door. The repair involves the removal of a 3/10 rivet.
23-09-96 2/2/96	'96 (BR) Clubcab with a "J" in the VIN at position 11 and built prior to 10/6/95	*Seatbelt buckle difficult to engage with one hand.* The driver side power seat may have a seat belt buckle that may be difficult to latch. The repair involves replacement of the seatbelt buckle.
23-21-96 3/29/96	'94-'96 (BR)	*Tailgate difficult to close in cold weather.* At less than 5° F the tailgate latch stop bumper may be too stiff to allow for easy closure. Inspect and replace bumper stop.
23-27-96 4/19/96	'96 (BR)	*Windnoise (whistle) around grille area.* If vehicle exhibits a windnoise (whistle) at speeds of 45 to 85 mph the diagnosis involves checking the grille for a manufacturing code "CAV3." If there is not a CAV3 stamp than the grille is not likely the source of the noise. If noise is from the grille, the repair involves adding 1/4" foam tape between the grille and hood.
23-29-96 5/10/96	'94-'96 (BR)	*Tailgate cracking on top inner ends.* Some vehicles may exhibit a sheet metal crack along the top inner ends of the tailgate. The bulletin describes the parts and the correct repair procedure.
23-45-96 8/2/96	'94-'96 (BR)	*Instrument panel creak.* This bulletin supersedes TSB 23-57-93, 8/8/93. A creak or squeak may be present on the left or right side of the instrument panel. The noise is caused by two sheet metal parts rubbing together. The repair involves loosening the instrument panel and providing additional clearance between the cowl and instrument panel support joint.
23-46-96 8/2/96	'94-'96 (BR)	*Rattle in door area.* Inspect the area of the door latch face around the lower window channel retaining bolt. If necessary perform the outlined repair procedure.

CATEGORY 23 BODY...*Continued*

23-69-96 11/22/96	'97 (BR)	*Repair procedure for fallout/damaged paint.* Mopar Parts has released a new product, Mopar Fallout Removal Kit (p/n 04882417) for correcting paint damage due to industrial fallout, rail dust, over-spray and volcanic ash. The Mopar Fallout Removal Kit does not use a compounding process or acid wash and is the current Chrysler preferred method for correcting fallout damage. This product uses a clay polymer material and a liquid that are safer and better than other fallout removal methods.

CATEGORY 24 AIR CONDITIONING

TSB#	MODELS	SUBJECT/DESCRIPTION
124-01-96A 10/18/96	'94-'96 (BR)	*Heater A/C system changes mode to defrost when accelerating.* This bulletin supersedes TSB 24-01-96 (2/2/96). The vacuum supply line to the Heater A/C system may drop when accelerating or when speed control engages. This may cause the vacuum motor to switch to defrost. The repair involves the addition of a vacuum check valve to the vacuum system.
24-12-96 8/2/96	'96 (BR) Vehicles assembled between 2/1/96 and 6/28/96 with a VIN code 3 as the first digit.	*Water leaks from HVAC floor outlet onto floor.* Water may drain out of the HVAC floor outlets while operating the A/C system. The bulletin describes the diagnosis and repair procedure.
24-16-96 10/11/96	'95-'96 (BR) With engine serial number 56230585 thru 56293178 or 45232867 thru 45360437. These engines were installed befor 6/1/96.	*Vacuum system contaminated with engine oil.* Some Turbo Diesel trucks were produced without a check valve on the vacuum pump. Without a check valve oil may enter the vacuum system. A visual inspection of the HVAC system is presented and the repair procedure outlined.

YOU MIGHT BE A FORD/CHEVY OWNER IF...*

1. You write off a radiator as a business expense.
2. Your truck is insured by Smith & Wesson.
3. There is a puddle in your driveway year-round.
4. Your stereo speakers used to belong to the Moonlight Drive-in Theater.
5. Your wife has ever said, "Come move this transmission so I can take a bath."
6. You read the *Auto Trader* with a highlight pen.
7. You've ever hit a deer with your truck, deliberately.
8. There are more than four hats in the rear window of your truck.
9. Directions to your house include "turn off the paved road."
10. Your hood ornament used to be a bowling trophy.

**From "You Might Be A Redneck If . . . ." by Jeff Foxworthy. Foxworthy's "Southern" humor can be found at bookstores everywhere. Buy his books for some serious fun.*

TSB's Issued During '97

CATEGORY 2 FRONT SUSPENSION

TSB #	MODELS	SUBJECT/DESCRIPTION
02-03-97A 8/29/97	'94-'97 (BR)	*Rear of vehicle sits too low.* This bulletin supersedes TSB 02-03-97 as there were part number errors in the previous bulletin. The bulletin applies to 1500 series trucks rated at 6400 GVW and 2500 series trucks rated at 8800 GVW. The bulletin discusses rear leaf springs and shock absorber availability that will increase the height of the vehicle when the vehicle is at maximum GVW. The bulletin gives specific part numbers for various applications.

CATEGORY 5 BRAKES

TSB #	MODELS	SUBJECT/DESCRIPTION
05-03-97 3/17/97	'94-'97 (BR)	*Chassis dynamics diagnosis.* The bulletin supersedes TSB 05-10-96 as revisions have been made to torque specifications and procedures. The bulletin summarizes different conditions that can cause a vehicle to move to the right or left when not controlled by the driver. A lengthy test procedure is outlined to isolate the cause of vehicle drift.
05-04-97 3/28/97	'94-'97 (BR) 2500-3500 series	*Accelerated brake lining wear, front versus rear.* This bulletin supersedes TSB 05-02-96A as the bulletin incorporates the use of revised brake linings for trucks with 80mm calipers (typically found on 2500, 4x2 trucks). The bulletin discusses wear conditions, repair procedures, part numbers and rear brake adjustment procedures.
05-07-97 9/22/97	'98 (BR)	*Parking brake release handle does not fully return.* The bulletin applies to trucks built prior to 8/15/97. If applicable, the repair procedure involves replacing a park brake release lever with a revised part.

CATEGORY 7 COOLING

TSB #	MODELS	SUBJECT/DESCRIPTION
07-03-97 5/9/97	All	*Engine coolant usage.* This information only bulletin discusses the use of propylene glycol instead of ethylene glycol coolants.

CATEGORY 8 ELECTRICAL

TSB #	MODELS	SUBJECT/DESCRIPTION
08-01-97 2/3/97	'96-'97 (BR)	*JTEC powertrain control wiring harness connector repair packages.* If a dealership determines that a powertrain customer complaint could be related to a poor electrical connection, the PCM connectors should be inspected. The bulletin describes an assortment of electrical connector and terminal repair components that are available to aid in powertrain electrical wiring repairs.
08-21-97 5/23/97	'94-'97 (BR)	*Engine failed to crank — no start.* This information only bulletin discusses a condition where the engine does not crank over when the ignition is placed in the start position. The shop should then refer to the appropriate '97 Service Manual for proper diagnosis of the starter motor's electrical circuit.

CATEGORY 8 ELECTRICAL...*Continued*

08-22-97A 7/11/97	'96-'97 (BR)	*Inoperative speed control.* This bulletin supersedes TSB 08-22-97, dated 6/20/97. The problem covered by the bulletin is an inoperative speed control due to a vacuum supply hose that is loose, leaking or deteriorated. Using the diagnosis as outlined in the '97 Service Manual determine the cause of the inoperative speed control. Perform the repair as outlined in the bulletin.
08-27-97A 9/26/97	'97 (BR)	*Inoperative CD player as a part of sales code RAZ radio.* This bulletin supersedes TSB 08-27-97, dated 7/18/97. The bulletin applies to '97 vehicles equipped with an AM/FM/cassette/CD player, sales code "RAZ" radio. A condition is described where the CD player may become inoperative, and will not accept the CD when attempting to insert the disk into the radio. The condition can be intermittent and may occur more often in hotter ambient temperatures. The AM/FM radio and cassette portion of the radio will continue to operate normally. The repair involves an exchange of the unit as supplied by Chryslers repair center.
08-30-97 9/5/97	'98 (BR)	*Ashtray receiver lamp degrades from blue-green to bright white.* The ash receiver lamp, when illuminated, may change from a blue-green illumination to a bright white illumination. This change will occur over a long period of time of continuous use. This bulletin involves replacing the ash receiver lamp and housing with revised parts.
08-32-97 9/19/97	'94-'98 (BR)	*NHTSA authorized airbag deactivation for medical necessity.* This information only bulletin describes the procedures necessary to deactivate airbags authorized by NHTSA. Airbag deactivation is a customer pay procedure, not covered under the provisions of warranty.
08-35-97 9/26/97	'98 (BR)	*Dead battery from ignition off draw (IOD).* The problem described is a dead battery due to the glove box lamp remaining illuminated when the glove box door is closed. The proper diagnosis involves performing an ignition-off draw (IOD) test as described in the '98 Service Manual. If necessary the bulletin outlines the installation of two spacers between the glove box lamp switch bracket and the instrument panel glove box opening upper reinforcement.
08-39-97 11/28/97	'98 (BR)	*Remote keyless entry transmitter batteries discharge prematurely.* This bulletin applies to vehicles built prior to August 15, '97 and describes a condition where the Remote Keyless Entry transmitter batteries discharge in approximately 6 weeks. The repair calls for replacement and reprogramming of the transmitter.

CATEGORY 11 EXHAUST

TSB #	MODELS	SUBJECT/DESCRIPTION
11-01-97 5/16/97	'94-'97 (BR)	*Whine or howl while driving at highway speeds.* This bulletin applies to vehicles equipped with the diesel engine option. Some vehicles may experience a whine or howl noise while driving at highway speeds. This noise may be miss-interpreted as turbo whine. After proper diagnosis of the condition the bulletin's repair procedure involves replacement of the muffler.

CATEGORY 14 FUEL

TSB #	MODELS	SUBJECT/DESCRIPTION
14-07-97 7/18/97	'94-'97 (BR)	*Diesel fuel injection pump tampering.* This information only bulletin applies to inline fuel injection pumps as found on '94 thru early '98 model trucks. The bulletin stipulates that there are only a few items on the pump that are serviceable (low idle adjustment, timing adjustment, throttle linkage adjustment, and air bleed procedures). Any other adjustments or modifications are considered tampering. Tampered injection pumps are not warrantable. The bulletin shows the service location where to look for suspected tampering.

CATEGORY 18 VEHICLE PERFORMANCE

TSB #	MODELS	SUBJECT/DESCRIPTION
18-25-97 8/15/97	'96-'97 (BR)	*EGR system failure with Hex Code $2E* on 5.9L Diesel.* This bulletin applies to vehicles equipped with a 5.9L Cummins Diesel engine built between Jan. 1, 1996 and Dec. 31, 1996 with California emissions sales code NAE. If while performing other diagnostics, the technician notices Hex Code $2E - EGR SYSTEM FAILURE on the Diagnostic Scan Tool (DRB III) the diagnosis outlined in the bulletin should be followed. The customer may or may not experience any engine driveability symptoms. The Malfunction Indicator Lamp (MIL) will not be illuminated. The repair involves using revised test procedures to diagnose the EGR system and selectively erase and reprogram the Powertrain Control Module (PCM) with new software (calibration changes) for the condition listed. *Editor's note: $2E is correct.
18-29-97A 12/5/97	'96-'98 (BR) with Cummins engine and five-speed transmission	*Vehicle bucking on '96 thru '98 trucks with the Cummins engine and a manual transmission.* This bulletin supersedes TSB 18-29-97, dated 10/17/97. The condition to be corrected is one where the vehicle may exhibit a bucking or jerking condition while under light acceleration or while driving at steady state speeds. The vehicle may be in a loaded or unloaded state when the bucking or jerking occurs. This condition results from the sensitivity of the throttle linkage to driver input. The repair procedure involves replacement of the throttle linkage levers with revised parts.

CATEGORY 19 STEERING

TSB #	MODELS	SUBJECT/DESCRIPTION
19-08-97 5/30/97	'96-'97 (BR)	*Clunk/rattle felt in steering column/wheel.* This bulletin supersedes TSB 19-01-96, dated 2/9/96 for 1996 model year vehicles. This bulletin applies to all vehicles built in the United States (first digit of VIN = 1) and vehicles built in Mexico (first digit of VIN = 3) before Mar. 3, 1997. The condition to be examined is a clunk or rattle that maybe felt in the steering wheel/column during slow turns, rough road driving, and stops. The diagnosis involves inspection of the front suspension and steering components, including a check of all fasteners for proper torque as specified in the appropriate Service Manual. The repair procedure involves replacement of the steering intermediate shaft.
19-10-97 8/15/97	'94-'98 (BR)	*Steering wander.* If when driving on a straight road, a higher than normal steering wheel movement (perceived as excessive play) is required to keep the vehicle going straight or if over-compensating the steering to keep the vehicle from wandering is a condition, the bulletin describes the diagnosis and repair procedure. The repair involves adjustment of the over-center and, if necessary, the worm thrust bearing preload adjustments on the steering gear.
19-16-97 11/28/97	'94-'97 (BR)	*Lower steering column noise and/or minor lower steering column movement.* This bulletin applies to vehicles built before Dec. 31, 1996 and describes a lower steering column noise and/or minor lower steering column movement. If movement in the steering column is greater than the tolerance, the repair involves adding a "toe plate" (shim) to the steering column.

CATEGORY 21 TRANSMISSION

TSB #	MODELS	SUBJECT/DESCRIPTION
21-12-97 8/29/97	'96-'97 (BR)	*Transfer case shifter buzz or rattle.* This bulletin supersedes TSB 21-13-96, dated 9/20/96. A buzz or clatter may be heard from the 4x4 transfer case shifter at an engine speed of approximately 2000 rpm. The condition may worsen when the engine is under load. On vehicles equipped with automatic transmission the diagnosis must be done with the transmission in overdrive and torque converter clutch engaged. If necessary the correction involves bending the shift lever spring reaction tab outward to increase the spring tension on the shift lever.

CATEGORY 22 WHEELS & TIRES

TSB #	MODELS	SUBJECT/DESCRIPTION
22-01-97 6/13/97	'94-'97 (BR)	*Tire and wheel runout.* Radial runout is the vertical distance between the high and low points on the tire or wheel edge measured at the center line of the tread. Lateral runout is the horizontal movement of the tire or wheel measured near the shoulder of the tire. Runout of more than the preferred specification may cause the vehicle to shake. This information only bulletin provides the proper specification for runout.

CATEGORY 23 BODY

TSB #	MODELS	SUBJECT/DESCRIPTION
23-03-97 2/14/97	'89-'93 (AD) '94-'97 (BR)	*Difficult to clean light colored "chalky" residue from black plastic body components.* The discussion covers difficult to clean light colored "chalky" residue from exterior plastic body components that are molded in black, especially those that are textured, such as door handles, mirrors, roof rack attachments, etc. Frequently, this "chalky" residue is actually an accumulation of car wax, road grime, etc. trapped in the plastic grain. The correction is to clean the component with a soft bristle brush and mild detergent (liquid dish soap) until the residue is gone.
23-22-97 4/4/97	'94-'97 (BR)	*Driver's side wiper blade contacts A-Pillar.* This bulletin applies to vehicles built before Oct. 15, 1996. If the driver's side wiper blade contacts A-Pillar or a popping sound can be heard when the driver's side wiper blade reaches its full upper wipe position (farthest to the left) during high speed wiper operation, this bulletin describes the repair procedure. The repair has the dealership replace the wiper blades with a blade that has a revised air deflector.
23-25-97 5/2/97	'96-'97 (BR)	*Windnoise (whistle) around grille area.* This bulletin supersedes TSB 23-27-96, dated 4/19/96. Vehicles may exhibit a condition where a windnoise whistle occurs from the front of the vehicle. This condition can occur while driving the vehicle at highway speeds between 45-65 mph or at slower speeds when driving into a headwind. If necessary a foam strip is installed between the grille and hood.
23-27-97 5/9/97	'94-'97 (BR)	*Water leaking through rear window.* The problem is water leaking past rear window module into cab of vehicle. The bulletin outlines the repair procedure.
23-39-97 6/27/97	'94-'97 (BR)	*Driver side power mirror vibrates while driving.* This bulletin supersedes TSB 08-64-94, dated 11/4/94. The condition covered in the bulletin is one where the driver side power mirror vibrates causing blurred images in driver side mirror while driving. The repair involves installing a power mirror support bracket onto the driver's side mirror
23-61-97 11/28/97	'94-'98 (BR)	*Noise coming from cargo box area.* The problem is an "oil canning" noise complaint coming from the box area caused by the cargo box cross member contacting the vehicle's frame as the vehicle is operated over a rough-surfaced road. The repair involves installing isolators on two cargo box cross member rails.
23-67-97 12/6/97	'98 (BR)	*Upper rear corner of front door contacts upper front corner of cargo door.* This bulletin applies to Quad Cab Ram trucks and describes a door closing condition where the upper rear corner of the front door may come in contact with the upper front corner of the cargo door, causing the paint to chip off the front and/or cargo door. If such, the correction is the installation of an anti chip plastic molding over the chipped area.
23-68-97 12/19/97	'98 (BR)	*Water leaking into vehicle through side cowl panel.* This bulletin applies to vehicles built between November 16, 1997 and November 26, 1997. If water leaks through either the right and/or left side cowl panels and dampens the carpet in the foot well area, a trim cover is removed and a water proof patch is installed over the cowl panel.

CATEGORY 24 AIR CONDITIONING

TSB #	MODELS	SUBJECT/DESCRIPTION
24-11-97 7/11/97	'94-'98 (BR)	*A/C evaporator odor.* This bulletin supersedes technical service bulletin 24-06-95A, dated 5/26/95. Some vehicle operators may experience a musty odor from the A/C system, primarily at start up in hot and humid climates. This odor may be the result of microbial growth on the evaporator core. During normal A/C system operation, condensation forms in and around the A/C evaporator. When airborne pollutants mix with this condensation, bacteria and fungi growth begins and odor results. The repair involves cleaning the evaporator with Mopar aerosol cleaner.

TSB's Issued During '98

CATEGORY 5 BRAKES

TSB #	MODELS	SUBJECT/DESCRIPTION
05-04-98 6/12/98	'97 - '99 (BR)	*Height sensing proportioning valve removal.* This procedure should only be performed on 2500 series 4x4 vehicles that are continuously operated at 75% or greater GVW and have had their rear suspension altered. The bulletin describes a procedure the dealer should follow in the removal of a rear height sensing proportioning valve. Removal of the proportioning valve should help prolong front brake life.

CATEGORY 6 CLUTCH

TSB #	MODELS	SUBJECT/DESCRIPTION
06-01-98 6/19/98	'97 - '98 (BR)	*Release fork orientation.* This bulletin applies to vehicles equipped with an NV4500 manual transmission and either the 8.0L gas engine or the 5.9L Cummins diesel engine. The bulletin covers the proper installation of the clutch release fork.

CATEGORY 7 COOLING

TSB #	MODELS	SUBJECT/DESCRIPTION
07-08-98 12/11/98	'98 - '99 (BR)	*Diesel engine overheating.* This information applies to vehicles equipped with a 24 valve Cummins diesel engine with an engine serial number (ESN) 56512007 or prior. This bulletin involves replacing the thermostat with a revised part (05015090AA).

CATEGORY 8 ELECTRICAL

TSB #	MODELS	SUBJECT/DESCRIPTION
08-09-98 3/13/98	'94 - '98 (BR)	*Driver side power mirror vibrates while driving.* This bulletin supersedes technical service bulletin 23-39-97, dated June 27, 1997. The problem covered is that the driver side power mirror vibrates or causes blurred images in driver side mirror while driving. If removal of aftermarket bugscreen deflectors does not cure the problem, a procedure for installing a mirror reinforcement bracket is described.
08-11-98 3/13/98	'98 (BR)	*Delayed operation of fog lamps.* The fog lamps illuminate approximately two seconds after being turned ON with the headlamp LOW beams illuminated. This condition may also occur when the headlamps are turned from HIGH beam to LOW beam with the fog lamps ON. The repair involves checking the headlamp connector for proper wire location.
08-13-98 3/27/98	'98 (BR)	*Headlamp switch knob pulls out of headlamp switch.* This bulletin applies to vehicles built before November 16, 1997. Rotate the headlamp switch knob to the full dim position. Then, apply pressure to the side of the knob and pull the knob to turn the headlamps ON. If the knob pulls out of the headlamp switch when the headlamps are turned ON, replace the knob using the described repair procedure.

08-14-98 3/27/98 — ‘98 (BR)

Clicking, rattling, or ratcheting noise coming from the seat belt retractor.
This bulletin applies to all club cab vehicles (both two door Club Cab and Quad Cab models) built before March, 5, 1998. During normal operation, the seat belt retractor on the vehicles listed above may emit a clicking, rattling, or ratcheting noise. This noise may be caused by a solenoid that is energized and de-energized to operate the retractor spool of the seat belt retractor assembly. The solenoid is controlled by a Seatbelt Control Timer Module (SCTM) which unlocks the retractor when energized.

If your diagnosis determines and the owner feels that the noise occurs too frequently, the SCTM on your vehicle may be too sensitive and should be replaced.

08-16-98 4/17/98 — ‘89 - ‘93 (AD), ‘94 - ‘99 (BR)

Installation of radio transmitting equipment.
This bulletin supersedes technical service bulletin 08-22-95, dated May 12, 1995. This information-only TSB is provided to assist in properly installing communication equipment in Chrysler vehicle. This information should be given to any owner inquiring about installing radio transmitting equipment.

08-17-98 Rev. C 12/30/98 — ‘94 - ‘99 (BR)

Airbag on-off switches.
This bulletin supersedes technical service bulletin 08-17-98 Rev. B dated September 18, 1998. This information only bulletin is provided to identify the parts and procedures necessary to deactivate airbags authorized by NHTSA. Airbag deactivation is a customer pay procedure.

08-21-98 5/22/98 — ‘98 (BR)

Radio Interference to/from two-way radio receivers.
Customers may complain of intermittent poor reception on their two-way radios. This condition does not affect the operation of any AM or FM band radio. Radio receivers from approximately 20 MHZ to 174 MHZ may be susceptible to Radio Frequency Interference (RFI) from the fuel pump module’s motor. If there is RFI, the bulletin describes the installation of an RFI filter in series with the electric fuel pump.

08-35-98 6/24/98 — ‘98 (BR)

Instrument cluster bezel breaks when removed.
This information-only bulletin is a reminder that the instrument cluster bezel is retained by several snap clip retainers and one screw located underneath the power outlet access door. It is imperative that this singular screw is removed prior to attempting to remove the instrument cluster bezel from the instrument cluster.

08-36-98 6/24/98 — ‘89 - ‘93 (AD), ‘94 - ‘99 (BR)

Use of two digit calendar year codes in automotive computers.
There has been a great deal of recent media attention regarding the turn of the century (year 2000, Y2K, etc.) and the effect it will have on computers that have used two-digit calendar year coding in their programming. Questions are arising regarding computers used in automotive applications and the effect year 2000 will have on them.

Two digit calendar-year codes have not been used in any Chrysler automotive onboard applications and no problems related to use of two digit coding for calendar years are anticipated.

08-51-98 11/27/98 — ‘99 (BR)

Compass mini trip computer indicates erroneous average miles per gallon, distance to empty, and/or trip odometer.
This bulletin applies to vehicles equipped with the compass mini trip computer (sales code CUS). The display will show an erroneous number in the third digit from the right. If repair is necessary, the module is replaced.

08-54-98 12/30/98 — ‘99 (BR)

Static inside speakers and/or side speaker cuts out when power outside mirror operates.
This bulletin applies to vehicles equipped with the power audio amplifier (sales code RDE) and heated outside power mirrors (sales code GTS) built between September 7, 1998 and November 3, 1998. The problem discussed is that static can be heard in the side speakers and/or the sound coming from the side speakers can cut out and/or in extreme cases, the radio can cut out with the radio in the FM mode when the power mirror is actuated to its end of travel. The repair involves replacing the mirrors.

CATEGORY 9 ENGINE

TSB #	MODELS	SUBJECT/DESCRIPTION
09-06-98 10/30/98	'98 (BR)	*Incorrect engine oil dipstick.* This information applies to vehicles equipped with 24 valve Cummins diesel engines. Some early 1998 24 valve diesel engines were built with an incorrect dipstick calibration. This incorrect marking causes an overfilled condition of approximately 1 1/2 quarts when at the top end of the safe zone on the dipstick. This overfill condition is not damaging to the engine. The Cummins part number is stamped on the dipstick. The incorrect Cummins P/N is 3944594. The problem is corrected with the installation of a revised dipstick, 05014562AA/Cummins 3935648.

CATEGORY 11 EXHAUST

TSB #	MODELS	SUBJECT/DESCRIPTION
11-08-98 9/25/98	'94 - '98 (BR)	*Turbo Diesel wastegate actuator repair kit.* A new kit has been released that will allow technicians to repair turbochargers with failed wastegate actuators.

CATEGORY 14 FUEL

TSB #	MODELS	SUBJECT/DESCRIPTION
14-01-98 Rev. A 7/17/98	'98 (BR)	*High pressure fuel line service.* This bulletin supersedes technical service bulletin 14-01-98 dated March 6, 1998. This information applies to the 5.9L Cummins electronically injected 24 valve diesel built prior to engine serial number (ESN) 56462592. Design revisions have been made to the injector connector tube, and the new design can be re-torqued multiple times without compromising the seal between the connector tube and high pressure fuel line. The new part number for this connector tube is 05013856AA/Cummins 3944833.
14-02-98 3/27/98	'98 (BR)	*Fuel filter requirements.* With the introduction of the Cummins 24 valve electronically injected engine, a new VP44 injection pump was also introduced. The VP44 injection pump requires finer fuel filtration due to tighter tolerances within the pump. Whenever a fuel filter is replaced, make sure the replacement filter is part number 04883963AB/Cummins 3931476/Fleetguard FS19528.
14-04-98 5/8/98	'98 (BR)	*Accelerator pedal buzzing noise with cruise control engaged.* This bulletin applies to vehicles equipped with the 5.9L 24 valve Cummins diesel engine. If an audible buzz is coming from the accelerator pedal when the cruise control is engaged a road test diagnosis is described. If necessary, a re-routing of the accelerator cable is described.

CATEGORY 18 VEHICLE PERFORMANCE

TSB #	MODELS	SUBJECT/DESCRIPTION
18-06-98 2/27/98	'94 - '98 (BR)	*Hard starting diagnosis.* This information applies to the 5.9L Cummins mechanically injected 12 valve diesel. The discussion covers hard or no-start diagnosis and repair.
18-07-98 2/27/98	'94 - '98 (BR)	*Effects of incorrect idle speed.* This information applies to the 5.9L Cummins mechanically injected 12 valve diesel. Incorrect idle adjustments (either too high or low) may cause many different customer concerns. The bulletin gives a list of items that explain the condition/symptoms associated with incorrect idle settings along with component checks and specifications to set it properly.

CATEGORY 21 TRANSMISSION

TSB #	MODELS	SUBJECT/DESCRIPTION
21-10-98 Rev. A 9/25/98	'94 - '99 (BR)	*Loss of fifth gear.* This bulletin supersedes technical service bulletin 21-10-98, with an effective date of September 11, 1998. This bulletin applies to vehicles equipped with a NV 4500 manual transmission and the 8.0L V10 gas engine or the 5.9L Cummins diesel engine. The problem described is that the transmission operates normally through all ranges except fifth gear. The 14 page bulletin describes the proper repair procedure.

CATEGORY 23 BODY

TSB #	MODELS	SUBJECT/DESCRIPTION
23-13-98 5/8/98	'98 (BR)	*Rear sliding window difficult to open, will not remain latched, and/or leaks water past the lower run channel.* If the rear sliding window is difficult to open, will not latch, and/or leaks water past the sliding rear window's lower run channel, this bulletin describes the proper diagnosis/repair.
23-16-98 5/1/98	'98 (BR)	*Splash guards (mud flaps) discolored and/or distorted due to proximity to tailpipe.* This bulletin applies to vehicles equipped with dual rear wheels. Vehicles equipped with splash guards may experience discoloration and/or distortion along the outside edge of the passenger side rear splash guard due to the proximity to the tailpipe. If necessary, a new tailpipe assembly is installed.
23-17-98 5/1/98	'94 - '98 (BR)	*Center armrest driver side hinge cover broken.* If the center armrest upper inertia latch cover (driver side hinge cover) is broken, the proper repair involves replacement of the hinge.
23-35-98 8/7/98	'94 - '99 (BR)	*Door trim panel retainer clip attachment breakage when door trim panel is removed for service.* The bulletin cautions the dealer that damage to the door trim panel may occur if the door trim panel retainer clips are separated from the door without using a trim panel removing tool.
23-37-98 8/21/98	'98 - '99 (BR)	*Cargo net eliminated from production.* This bulletin applies to standard cab vehicles and informs the dealer network that the cargo net is no longer a production item. It can be purchased through the parts department using Mopar number 04761197.
23-58-98 11/27/98	'99 (BR)	*Wind noise (whistle) around grill area and/or dimples on the grill painted surface opposite of the grill fasteners.* This bulletin applies to Ram trucks equipped with the sport package. If there is a windnoise whistle occurring from the front of the vehicle at highway speeds between 45-65 mph or at slower speeds when driving into a headwind, this bulletin describes the repair procedure.

TSB's Issued During '99

CATEGORY 2 FRONT SUSPENSION

TSB#	MODEL	SUBJECT/DESCRIPTION
02-06-99 Rev. A 12/17/99	'94-'00 (BR)	*Front wheel bearing grease is evident on the bearing seal area.* This bulletin supersedes TSB 02-06-99, dated June 11, 1999. The revisions include the addition of 4x2 models and additional model years. This information-only bulletin discusses the fact that front wheel bearings may be incorrectly diagnosed as faulty due to the evidence of wheel bearing grease on the bearing seal areas. This grease purge is a normal design condition. The factory fill of the bearings includes a slightly greater amount of grease than is required for the bearing lifetime lubricant. A portion of the grease purges through the self-venting seal in the initial few thousand miles to form an additional barrier in the area of the seal and the stamped slinger. This barrier aids in the prevention of contaminants passing through the seal and into the bearing. Do not remove or clean the purged grease as part of normal maintenance because it provides additional protection and once removed, damage to the seal and bearing could result.
02-13-99 09/10/99	'94 - '99 (BR)	*Squeaking noise from rear leaf springs.* This bulletin supersedes TSB 02-03-96, dated may 31, 1996. If the diagnosed condition is a squeaking noise coming from the rear of the vehicle, the bulletin gives the correct repair procedure to replace the leaf spring tip liners/install spring clip isolators.

CATEGORY 5 BRAKES

TSB#	MODELS	SUBJECT/DESCRIPTION
05-04-99 05/28/99	'98 - '99 (BR)	*Chassis dynamics diagnosis.* This 21-page bulletin involves diagnosis and repair of a vehicle drift condition and on some vehicles, installing a shim between the wheel and the brake rotor, between the wheel and hub/bearing assembly, or between the wheel and hub extension. Chassis dynamics diagnosis is the diagnosis of a condition where the vehicle may move either to the right or the left when not controlled by the driver. This condition can be caused by any of the following: Non-factory installed options (e.g. snow plow), tires or wheels of different size, aftermarket wheels, tires that have a belt that has shifted, incorrect tire pressure, a vehicle that is carrying extra added weight (e.g. tool boxes), steering and/or suspension components that are worn or damaged, wheel bearings that are worn or damaged, a vehicle that is not with in alignment specifications, brake drag from brake components that do not release, or braking imbalance. Additionally, under certain road conditions (e.g. high road crown, grooved roads, etc.), most vehicles will move to the right or left uncontrolled by the driver. Also, the same may happen if a cross-wind condition exists.
05-11-99 12/31/99	'94 - '96 (BR)	*Revised power brake booster check valve.* This bulletin applies to vehicles equipped with the 5.9L Cummins diesel engine. A revised power brake booster check valve p/n 05011393AA has been released for service. The new check valve performance has been improved by changing the flapper style check valve to a spring loaded style check valve. The spring loaded style check valve performance is superior, especially in vehicles that utilize mechanical vacuum pumps to provide the vacuum source to operate the power brake booster. Part number 05011393AA should be used any time the power brake booster check valve is serviced on the subject model vehicles.

CATEGORY 8 ELECTRICAL

TSB#	MODELS	SUBJECT/DESCRIPTION
08-06-99 Rev. A 12/17/99	'98 - '00 (BR)	*Radio interference to/from two-way radio receivers.* This bulletin supersedes technical service bulletin 08-06-99, dated March 5, 1999. Customers may complain of intermittent poor reception on their two-way radios. This bulletin involves installing a RFI filter in series with the electric fuel pump motor.
08-16-99 6/11/99	'99 (BR/BE)	*Inoperative or intermittent remote keyless entry (RKE) transmitter.* This bulletin supersedes TSB 08-16-99, Dated May 28, 1999. This bulletin applies to vehicles built prior to March 1, 1999. It applies only to vehicles equipped with the new peanut shaped transmitters. The problem discussed is an inoperative RKE transmitter. This condition may be intermittent and will have similar symptoms to a dead transmitter battery. This can be caused by a lost or intermittent contact between the battery terminal and the printed circuit board. A transmitter repair kit containing a new case with an improved battery terminal has been released. This bulletin involves replacing the RKE transmitter case.
08-17-99 05/28/99	'99 (BR)	*Compass/mini-trip computers no longer need calibration during new vehicle preparation.* This information-only bulletin applies to vehicles equipped with the compass/mini-trip computer (sales code CUS) built after April 28, 1999. Vehicles equipped with the compass/mini-trip computer are now having their compasses calibrated by the assembly plant making it no longer necessary to calibrate the compass during new vehicle preparation. However, in order to ensure proper operation of the compass, it will still be necessary to set the variance of the compass prior to vehicle retail delivery.
08-22-99 07/02/99	'98 (BR)	*Intermittent operation of oil pressure gauge.* This bulletin applies to vehicles equipped with the 5.9L Cummins 12-valve Turbo Diesel engine built before January 5, 1998. The condition for correction is an oil pressure gauge that intermittently drops to zero pressure. In addition, the warning chime may sound when the oil pressure gauge drops to zero pressure and the check gauge lamp may come on. Proper repair involves selectively erasing and reprogramming the Powertrain Control Module (PCM) with new software (a calibration change).
08-28-99 08/20/99	'00 (BR)	*Simplified compass mini trip computer calibration.* This bulletin applies to vehicles equipped with the compass mini trip computer (sales code CUS). The subject model vehicles are shipped from the assembly plants with the compass mini trip computer NOT calibrated. This will be identified by "CAL" displayed on the compass mini trip computer. To calibrate the compass mini trip computer, drive the vehicle in a complete circle until "CAL" is no longer displayed on the compass mini trip computer.
08-32-99 10/01/99	'98 - '99 (BR)	*Radio interference to/from two-way radio receivers.* This bulletin addresses the complaint of intermittent poor reception on two-way radios, and discusses the proper repair. Radio receivers from approximately 30 MHZ to 50 MHZ may be susceptible to Radio Frequency Interference (RFI) from the Airbag Control Module (ACM). Note: technical service bulletin 08-06-99, dated March 5, 1999, addresses two-way radio interference from the fuel pump module and should be performed prior to performing this technical service bulletin.
08-37-99 11/12/99	'94 - '00 (BR)	*Airbag On-Off Switches.* This bulletin supersedes technical service bulletin 08-17-98 Rev C, dated December 30, 1998. This information-only bulletin identifies the parts and procedures necessary to deactivate airbags authorized by NHTSA. Airbag deactivation is a customer pay procedure, NOT covered under the provisions of the warranty.
08-39-99 12/10/99	'00 (BR)	*Communications may stop between the JTEC PCM and a generic scan tool.* This information applies to vehicles built before November 30, 1999. The JTEC Powertrain Control Module (PCM) may stop communications with a generic scan tool. This bulletin involves selectively erasing and reprogramming the JTEC PCM with new software calibration change (00Cal13 & 00Cal13A).

CATEGORY 8 ELECTRICAL...*Continued*

08-42-99 12/17/99 — ‘98 - ‘99 (BR)

The fuel gauge reads full for an excessive period of time.
This bulletin applies to vehicles equipped with the 5.9L Cummins diesel engine. After driving over 200 miles, the fuel gauge may read full until the vehicle travels over a bump in the road and then the gauge operates normally. This condition may be caused by the float in the fuel pump module sticking and may be difficult to diagnose. Perform the repair procedure (new fuel pump module) if the customer’s concern matches the description identified in the Symptom/Condition.

08-43-99 12/17/99 — ‘98 - ‘99 (BR)

Central timer module software update when a wiper module is replaced.
This bulletin applies to vehicles equipped with remote keyless entry. Due to a design change in MOPAR replacement wiper modules, the central timing module must be updated with new software in order to allow the wiper module to function properly. The outlined repair procedure must be performed any time the wiper module is replaced.

08-44-99 12/31/99 — ‘99 - ‘00 (BR)

Intermittent speaker operation/static.
This bulletin applies to vehicles equipped with the Infinity sound system sales codes (RBR, RBN, and RAZ) built before October 1, 1999. The condition is intermittent operation/static that may occur in any or all speakers. The bulletin describes the proper repair.

CATEGORY 9 ENGINE

TSB#	MODELS	SUBJECT/DESCRIPTION

09-04-99 07/16/99 — ‘98 - ‘99 (BR)

Hard-to-diagnose noise coming from the engine turbocharger area.
This bulletin applies to vehicles equipped with a Cummins 5.9L – 24V diesel engine built prior to engine serial number (ESN) 56587424. The ESN is located on the engine data plate which is located on the front left side of the engine, affixed to the gear housing.

A noise may be present which on initial investigation may sound like a noisy turbocharger bearing. The sound of the noise may be described as a whistle, a squeal, a howl, a moan, or a gurgle. The noise will be more noticeable as engine temperature increases. The noise will most often occur when the warm engine is operated between 1,500 and 2,200 rpm’s. The noise is usually heard in the cab, louder on the passenger side or seems to come form the dash vents. The noise may be caused by the coolant supply hose connector. The connector is located on the cylinder head next to the turbocharger. The connector is used to supply coolant to the heater hose. The bulletin describes the replacement of the hose connector.

CATEGORY 18 VEHICLE PERFORMANCE

TSB#	MODELS	SUBJECT/DESCRIPTION

18-02-99 02/19/99 — ‘98 - ‘99 (BR)

Erratic torque converter clutch (TCC) operation.
This information applies to vehicles equipped with a 5.9L 24-valve diesel engine and automatic transmission built between January 1, 1998 and December 18, 1998. Some vehicles may exhibit a surge-like condition while in fourth gear. This may be caused by the TTC unlocking and locking when it should be consistently locked. The cause of this erratic operation has been identified as electrical noise from the Throttle Position Sensor (TPS) or Alternator. This bulletin involves selectively erasing and reprogramming the Powertrain Control Module (PCM) with new software (calibration changes 98cal12 and 99cal14).

18-07-99 04/30/99 — ‘98 - ‘99 (BR)

Erroneous MIL illumination with DTC $A8 (P1763) governor pressure sensor volts too high.
This information applies to vehicles equipped with a reseries automatic transmission built before December 18, 1998. Some vehicles may exhibit a MIL illumination with DTC $A8 (P1763) - GOVERNOR PRESSURE SENSOR VOLTS TOO HIGH. The vehicle operator may experience slower than normal accelerations because the transmission may temporarily enter third gear “Limp-In” Mode. The “Limp-In” Mode may last until the vehicle owner cycles the ignition key. The technician may not detect a problem with the automatic transmission during a diagnostic test or

		test drive. The MIL is caused by an increase in hydraulic pressure. The increased hydraulic pressure is the result of a new valve body machining process. Vehicles built after January 1, 1998 have an automatic transmission with this new process valve body. Vehicles built before January 1, 1998 may experience this condition if either the transmission valve body or the entire automatic transmission was replaced with components manufactured after January 1, 1998. This bulletin involves selectively erasing and reprogramming the JTEC Powertrain Control Module (PCM) with new software (calibration changes 99Cal14, 98Cal12).
18-08-99 04/30/99	'98 - '99 (BR)	*Improved speed control system sensitivity to set speed.* Some customers may complain that their vehicle speed control system may be too busy or drift more than 2 mph below or above the initial vehicle set speed. Vehicle load and road/terrain conditions may impact this issue. The new PCM software improves the speed control system sensitivity so that the vehicle speed remains closer to its set speed with fewer engine rpm oscillations. This bulletin involves selectively erasing and reprogramming the JTEC Powertrain Control Module (PCM) with new software (calibration changes 98Cal12A, 99Cal 17). There is no change to the Cummins CM551 Engine Control Module (ECM) software.
18-09-99 05/21/99	'99 (BR)	*Common diagnostic trouble codes caused by an open fuse.* Analysis has revealed an issue with repeated repairs for the same Diagnostic Trouble Code (DTC). The DTC may be due to an overlooked open circuit used to power the component in question. In most instances, either the circuit fuse has been erroneously removed or the fuse itself is open (blown). The component in question, and its circuit, are often protected by two fuses. It is usually the lower amperage fuse that is either missing or open. The lower amperage fuse is positioned electrically in the circuit between the component in question and either a relay or the ignition switch. The lower amperage fuse will be located either in the underhood Power Distribution Center (PDC) or in the instrument panel Junction Block. The lower amperage fuse is often missing because it was removed erroneously for use in another low current circuit. If the lower amperage fuse is open (blown), then the circuit and component in question must be checked for an electrical short. Check to make sure that the open fuse was not exchanged with another fuse or was damaged by an installed accessory.
18-11-99 05/28/99	'98 - '99 (BR)	*Slow acceleration or lack of power while towing or hauling a heavy load.* This information applies to vehicles equipped with a 5.9L - 24V diesel engine built before engine serial number 56587297 with a date of engine manufacture of May 5, 1999. This information is available on the engine data plate, which is located on the left side of the engine, affixed to the gear housing. There may be a condition of low power or slow acceleration when towing or when hauling a heavy load. This software change, to the Cummins CM551 diesel engine controller, will increase engine torque. Some 1998 BR vehicles equipped with a 5.9L - 24V diesel engine may already have the latest software revision. Verify that the ECM is at calibration level 98T17 (p/n's 333034303J / 333035303J / 333036303J / 333037303J). If the calibration level is 98T17, then this TSB does not apply and further powertrain diagnosis may be required. This bulletin involves selectively erasing and reprogramming the Cummins CM551 Engine Control Module (ECM) with new software (calibration changes 98Cal T17 and 99CalT8B). There is no change to the JTEC PCM software.
18-21-99	'98 - '99 (BR)	*5.9L - 24V Cummins diesel low power or poor performance diagnostic.* The vehicle operator may complain of slow acceleration or a lack of power when towing or hauling moderate to heavy loads. The condition may be worse at higher altitude. Do not proceed with this technical service bulletin until TSB 18-11-99 has been performed. This bulletin further describes diagnostic procedures that may be used to assist the technician in the diagnosis of a low power or poor performance complaint.
18-24-99 11/15/99	'00 (BR)	*5.9L - 24V Cummins diesel low power or poor performance diagnostic.* The vehicle operator may complain of slow acceleration or a lack of power when towing or hauling moderate to heavy loads. The condition may be worse at higher altitude. This bulletin involves diagnostic procedures that may be used to assist the technician in the diagnosis of a low power or poor performance complaint. The procedures outlined start with confirmation that TSB 18-11-98 (turbocharger wastegate actuator repair kit) has been performed. Additionally, the technician should verify that the throttle is opening fully. • Perform the complete FUEL TRANSFER PUMP PRESSURE TEST procedure.

CATEGORY 18 VEHICLE PERFORMANCE...*Continued*

- Inspect the fuel tank rollover valve for restrictions and to ensure that the shipping cap has not been left on the end of the valve.
- Inspect the charge air cooler hoses and clamps for proper installation. Inspect all connections and clamps for looseness. Verify that no leaks are present when the engine is under boost conditions.
- While performing the following road test, verify that the turbo boost pressure is 16 psi during wide open throttle (WOT) acceleration.
- While road testing the vehicle in a safe area and manner, conduct an acceleration test. For vehicles equipped with an automatic transmission conduct a 0-60 mph acceleration test. For vehicles equipped with a manual transmission, conduct a 40-60 mph acceleration test in fourth gear. It may take the technician performing several acceleration tests to obtain consistent acceleration times. A performance vehicle/tire size/weight chart is provided. A summary of the chart reveals 0-60 mph test for automatic trucks 13.5 to 15 secondsis acceptable. In the 40 to 60 mph test, for manual trucks in fourth gear, can vary from 7.5 to 9.0 seconds. Correction factors for vehicle weight and altitude are presented.

18-24-99 11/15/99 — ‘00 (BR)

5.9L - 24V diesel engine intermittent engine stumble.
This information applies to vehicles equipped with a 5.9L - 24V diesel engine built before engine serial number 56624822 with a date of manufacture of August 28, 1999. This information is available on the engine data plate, which is located on the left side of the engine, affixed to the gear housing. The customer may experience a quick, momentary stumble while driving or when stopped with t he engine running. This condition is intermittent and may occur at any time during the operation of the vehicle. A change to the Cummins CM551 Engine Control Module (ECM) software corrects this condition (calibration change 99CalT9A).

CATEGORY 19 STEERING

TSB#	MODELS	SUBJECT/DESCRIPTION
19-03-99 05/07/99	‘94 - ‘99 (BR)	*Steering slow to return to center.* This bulletin supersedes technical service bulletin 19-01-94, dated January 28, 1994. This bulletin applies to 4x4 vehicles equipped with a Dana model 60 front axle (sales code DRD). The rate of steering return to center (after turning a corner) may be slower than normal or may require slight steering wheel correction while driving straight ahead. The repair involves performing a ball joint tightening sequence.
19-04-99 05/28/99	‘99 (BR)	*Steering system diagnosis.* Customers may complain that the steering system “feels heavy” or the steering wheel is not centered while driving on a straight road. The steering gear used on the 1999 Ram Truck is designed to have a heavy on-center steering characteristic. Before replacing a steering gear for a steering system “feel” complaint, perform the suggested diagnosis to ensure that the rest of the steering system components perform as designed.

CATEGORY 21 TRANSMISSION

TSB#	MODELS	SUBJECT/DESCRIPTION
21-08-99 04/30/99	‘96 - ‘99 (BR)	*Buzz, whine or moaning-type noise from a cold transmission when reverse is selected.* Some vehicles may exhibit an intermittent noise from the transmission when reverse gear is selected. This noise has been described as a buzz, whining, or moaning-like noise. The noise is most noticeable when transmission fluid temperature is below 100 degrees F (38C). The condition is caused by a resonance of the transmission regulator valve system. The repair involves replacing the transmission regulator valve.
21-14-99 11/05/99	‘00 (BR)	*47RE transmission - harsh or early shifts.* This information applies to vehicles equipped with a 5.9L - 24V diesel engine and 47RE automatic transmission built before engine serial number 56624822 with a date of manufacture of August

CATEGORY 21 TRANSMISSION

		28, 1999. This information is available on the engine data plate, which is located on the left side of the engine, affixed to the gear housing. Some early-built 2000 model year Ram Trucks may experience a harsh 3-4 shift. This condition may occur during any throttle position situation when transmission sump temperatures are 60 degrees F (15C) or higher. The harsh 3-4 shift may be more pronounced during heavy vehicle loading, e.g., trailer towing. Some 2000 M.Y vehicles may also experience an early 1-2 or 2-3 shift condition during wide open throttle (WOT) situations. This condition may have an impact on vehicle performance (acceleration). This condition may occur when transmission sump temperatures are 32 degrees F (0C) or higher. Changes to the Cummins CM551 engine control module (ECM) software/calibration corrects the above two conditions (calibration change 00Cal57T9A).
21-19-99 11/12/99	'99 - '00 (BR)	*47RE delayed TCC lock-up and/or MIL P1740 = TCC or O/D solenoid performance.* This information applies to vehicles built for the California market (NAE), equipped with a 5.9L - 24V diesel engine and built between March 2, 1999 and October 1, 1999. The customer may experience a delayed torque converter clutch engagement (lock-up). This condition may illuminate the Malfunction Indicator Lamp (MIL) due to Diagnostic Trouble Code (DTC) P1740 - TCC or O/D Solenoid Performance. In some situations, the customer may describe the condition as a lack of a transmission shift (TCC lock-up) between 30 and 50 mph. The transmission valve body upper housing separator plate was revised (wider slot) to improve fluid flow to the torque converter clutch. This bulletin describes the replacement of the transmission valve body upper housing separator plate.

CATEGORY 23 BODY

TSB#	MODELS	SUBJECT/DESCRIPTION
23-08-99 03/05/99	'94 - '99 (BR)	*Instrument panel creak.* This bulletin supersedes technical service bulletin 23-45-96, dated August 2, 1996. A creak or squeak may be present near the left and/or right side(s) of the instrument panel. The noise is caused by the sheet metal joint between the A-pillar and the dash panel plenum lower rubbing together. This bulletin describes the repair procedure which involves loosening the instrument panel and providing additional clearance between the A-pillar inner panel and dash panel.
23-18-99 05/21/99	'98 - '99 (BR)	*Bezel comes loose from seat belt retractor cover.* This bulletin applies to club/quad cab vehicles. The seat belt retractor cover bezel comes loose due to a cracked seat belt retractor cover. The crack may occur at the bottom of the opening where the seat belt bezel snaps into the cover. This bulletin describes the installation of a new seat belt retractor cover.
23-22-99 07/02/99	'94 - '00 (BR)	*Rattle in door area.* This bulletin supersedes technical service bulletin 23-46-96, dated August 2, 1996. Customers may complain of one or more of the following symptoms: rattle heard in the door area; door window shakes when closing; door lower window channel bolt has pulled through the door sheet metal; door sheet metal is cracking around the lower window channel bolt. This bulletin involves removing the window channel from the door and installing a revised window channel.
23-28-99 08/13/99	'98 - '99 (BR)	*Power seat track vertical adjustment stuck in a full upward or full downward position.* This bulletin applies to club or quad cab vehicles built before March 1, 1999. The repair condition is that the front and/or rear power seat track vertical adjuster motors are stuck in a full upward or full downward position. The repair involves removing existing lubrication on the power seat track adjustment lead screws and then applying a new lubricant.
23-35-99 Rev. A 10/01/99	'94 - '00 (BR)	*Child seat tether anchors.* This bulletin supersedes technical service bulletin 23-35-99 dated September 3, 1999. This bulletin identifies the parts and labor operation numbers necessary to install a child seat tether anchor.

TSB's Issued During '00

CATEGORY 2 FRONT SUSPENSION

TSB#	MODELS	SUBJECT/DESCRIPTION
02-04-00 Rev. A 05/12/00	'94 - '01 (BR)	*Squeaking/clicking noise from rear leaf springs.* If the vehicle has a squeaking/clicking noise coming from the rear of the vehicle, verify that the noise is coming from the rear springs as the vehicle's suspension goes through jounce and rebound. If a squeaking/clicking noise is coming from the rear springs, perform the repair procedure. The procedure involves replacing the spring tip liners and installing spring clinch clip insolators.

CATEGORY 5 BRAKES

TSB#	MODELS	SUBJECT/DESCRIPTION
05-04-00 05/01/00	'00 (BR)	*High pitched squeal from rear brakes.* This bulletin applies to 2500/3500 series Ram trucks built before March 1, 2000. The condition discussed is a high-pitched squeal coming from the rear brakes when the brakes are applied. The repair procedure involves installing revised rear brake shoes.
05-06-00 06/09/00	'00 - '01 (BR)	*Front brake caliper anti-rattle clip retainer service procedures.* This bulletin applies to vehicles built before June 26, 2000. Vehicles built between April 19, 2000, and June 26, 2000, were built with a front brake caliper anti-rattle clip retainer. This Technical Service Bulletin provides the installation procedures for the retainer.

CATEGORY 8 ELECTRICAL

TSB#	MODELS	SUBJECT/DESCRIPTION
08-05-00 04/21/00	'99 (BR)	*Intermittent operation of the instrument cluster.* The needle of the instrument cluster gauges may intermittently drop to zero and/or the telltale lamps, such as the AIRBAG warning lamp, may intermittently come on. The bulletin involves replacing the instrument cluster wire harness connector and associated wire terminals.
08-08-00 03/17/00	'99 - '00 (BR)	*Inoperative or intermittent remote keyless entry (RKE) transmitter.* The problem described is an inoperative RKE transmitter. This condition may be intermittent and will have similar symptoms to a dead transmitter battery. This bulletin discusses replacing and reprogramming the (RKE) transmitter.
08-11-00 03/24/00	'94 - '00 (BR)	*Recordable compact discs used in automotive CD players.* Some recordable compact disc media, such as CD-R and CD-RW, may not comply with the standard CD format used in automotive CD players. When these CDs are used, customers may encounter error messages skipping, or delaminating of the labels, which can cause an eject failure. It is important to question whether these kinds of CD media are being used. When customers encounter these symptoms, check the system with a known playable CD. The media may not be compatible with some automotive CD players. Replacing or exchanging the CD player will not address these issues.
08-16-00 04/28/00	'94 - '00 (BR)	*Front door speaker buzz.* The bulletin discusses a buss noise coming from the front door speaker(s). The noise may be more noticeable while listening to "talk" radio segments with deep male voices. The repair procedure involves installing a urethane foam pad between the inner door panel and the door trim.

CATEGORY 8 ELECTRICAL...*Continued*

08-17-00 05/12/00 — ‘99 - ‘00 (BR)

Intermittent speaker operation/static.
Intermittent operation/static may occur in any or all speakers. The bulletin applies to vehicles equipped with the Infinity sound system sales codes (RBR, RBN, and RAZ) built before October 1, 1999. This repair involves installing new speaker kits on both right and left front doors and installing foam between the inner door trim panel and the door.

08-18-00 05/12/00 — ‘98 - ‘01 (BR)

Radio Interference to/from two-way radio receivers.
Customers may complain of intermittent poor reception on their two-way radios. This bulletin involves installing a RFI filter in series with the electric fuel pump motor.

08-23-00 06/23/00 — ‘98 - ‘01 (BR)

Plastic boot to protect the electrical harness B+ end terminal at the generator.
While service is being performed to the engine, it may be possible for a momentary electrical short to occur. The electrical short may be caused when a metallic object, such as a wrench or oil filter, comes in contact with the B+ end terminal of the generator wire harness. The B+ end terminal is bolted to the generator B+ stud (output terminal). The B+ stud on the generator is protected by a plastic surround. Part of the wire harness end terminal may extend beyond the protective plastic surround for the B+ output terminal.

This bulletin applies to vehicles equipped with a 5.9L – 24V diesel engine built before engine serial number 56681800 with a date of manufacture of January 29, 2000. The repair procedure involves the installation of a protective rubber boot (part number 04487042) over the B+ terminal.

08-26-00 09/29/00 — ‘00 - ‘01 (BR)

Central timer module electrically “locks-up.”
This bulletin applies to vehicles equipped with remote keyless entry (sales code GXR). In addition, this bulletin applies to vehicles built on or before the following build dates: Ram trucks built at the St. Louis North Assembly Plant on or before August 21, 2000; Ram trucks built at the Saltillo Truck Assembly Plant on or before August 31, 2000; Ram trucks built at the Lago Alberto Truck Assembly Plant on or before September 6, 2000. The repair involves replacing the Central Timer Module (CTM) with a revised part.

CATEGORY 9 ENGINE

TSB#	MODELS	SUBJECT/DESCRIPTION

09-02-00 02/18/00 — ‘99 - ‘00 (BR)

A heavy oil or fuel-like odor coming from the diesel engine compartment.
This bulletin applies to vehicles equipped with a 5.9L diesel engine. The problem is a heavy oil or fuel-like odor coming from the engine compartment. This condition may occur after the engine oil has been changed. The odor appears to reduce in intensity as the engine oil ages. This aging usually occurs between the first 300 to 500 miles following the oil change.

The odor condition is the result of certain diesel engine oil additives. These oil additives are blended with the base oil during the manufacture of the engine oil. Some diesel engine oils with the American Petroleum Institute quality rating of CH-4 or CH-4+ may be more prone ot exhibiting the odor condition.

The DaimlerChrysler recommended diesel engine oil (p/n 04798231 or p/n 0479832) is formulated to minimize the heavy oil odor condition.

09-03-00 02/18/00 — ‘00 (BR)

Engine oil seepage past the oil fill cap on 5.9L-24V diesel engine.
This bulletin applies to vehicles equipped with a 5.9L-24V diesel engine built before engine serial number 56664950 with a date of manufacture of December 8,j 1999.

Oil seepage may be noticed in the area of the oil fill cap. This may be due to paint overspray around the oil fill opening of the cylinder head valve cover. The paint overspray may cause an uneven sealing surface. The corrective action involves using fine grit sandpaper to insure a smooth mating surface.

Another possible cause for the oil seepage may be a damaged oil fill cap o-ring. The o-ring may be cut die to the presence of a sharp corner around the top edge of the cylinder head cover oil fill opening.

CATEGORY 14 FUEL

TSB#	MODELS	SUBJECT/DESCRIPTION
14-01-00 02/04/00	'00 (BR)	*Thump/bump sound heard 1-3 seconds after the vehicle comes to a stop.* This bulletin applies to 2500 series Club/Quad cab vehicles equipped with the 6 ½ foot box built before December 1, 1999. Customers may hear a thump/bump sound that occurs 1-3 seconds after the vehicle comes to a complete stop. In some cases, the thump/bump sound may be transmitted through the floor of the vehicle allowing the customer to feel the thump/bump in the floor pan of the vehicle. The sound will only occur when the fuel level of the vehicle is between ½ and 7/8 tank of fuel. Since the fuel level of the vehicle must be between ½ to 7/8 full, the condition may be difficult to diagnose. The repair involves replacing the fuel tank.
14-02-00 04/14/00	'00 - '01 (BR)	*Crack in diesel fuel filter housing cover caused by an improper servicing procedure.* This bulletin applies to vehicles equipped with a 5.9L-24V diesel engine built before engine serial number 56686747 with a date of manufacture of February 09, 2000. Analysis of returned fuel filter housing covers has determined that a number of plastic covers are being replaced due to cracks. Further analysis has revealed that the cracks may be caused by improper cover removal procedures. Do not use the square opening to remove or install the cover. The fuel filter cover may crack. To remove or install the fuel filter cover correctly, only use the 1 1/8" hex head. Use of a six point socket is preferred.
14-03-00 04/14/00	'98 - '01 (BR)	*Maintenance to the Water-In-Fuel sensor probes due to possible fuel contamination.* The probes on the end of the Water-In-Fuel (WIF) sensor may become less effective at sensing the presence of water in the fuel if they are exposed to contaminated fuel. Contaminant from the fuel may insulate the WIF sensor probes and inhibit the WIF lamp from illuminating when water is present. Any time service is performed on the fuel filter or fuel filter housing, the probes on the end of the Water-In-Fuel sensor should be cleaned. Use a clean cloth to wipe the WIF probes of any contaminant.

CATEGORY 18 VEHICLE PERFORMANCE

TSB#	MODELS	SUBJECT/DESCRIPTION
18-015-00 Rev. A 12/21/00	'98 - '01 (BR)	*Driveability enhancements for winter fuel use and for hard starts.* This bulletin applies to vehicles equipped with a 5.9L-24V diesel engine built between engine serial numbers 56419738 to 56798357, with a date of manufacture of December 16, 1997 to November 15, 2000. The customer may complain of poor driveability when winter fuel is used to power the engine. Or, the customer may complain of a hard or no-start condition, while the engine is at normal operating temperatures, when using any type of good quality diesel fuel. The poor driveability condition may occur only when either straight #1 diesel fuel is used or when other special cold climate winter blend fuels are in use. The no-start or long engine crank condition may occur when attempting to restart the engine while the temperature of the engine is till close to its normal operating temperature. This hard hot restart condition may be experienced in all ambient climates, but may be more of a concern in warmer ambient climates. The repair involves selectively erasing and reprogramming the Cummins CM551 Engine Control Module (ECM) with new software.
18-024-00 12/21/00	'01 (BR)	*Low engine power when the automatic transmission is in overdrive.* This bulletin applies to vehicles equipped with a 24-valve diesel engine and automatic transmission built between engine serial numbers 56666444 to 56798357, with a date of manufacture of December 15, 1999 to November 15, 2000. This information is available on the engine data plate, which is located on the left side of the engine, affixed to the side of the timing gear housing.

CATEGORY 18 VEHICLE PERFORMANCE...*Continued*

The customer may complain of low engine power and/or poor performance. This engine condition may occur while the automatic transmission is being operated in its overdrive gear. This condition may be further aggravated if the customer is using the vehicle for towing purposes.

The Engine Control Module (ECM) software, on a 2001 Ram Truck equipped with a 24-valve diesel engine, is designed to “torque manage” the power output of the engine. This is done to protect the automatic transmission components. The revised software calibration restores the power output and improves the vehicle performance in overdrive.

Note: If TSB 18-015-00 Rev A has previously been performed too the vehicle in question, then the ECM software has already been revised with the correct calibration to address the above condition. The ECM will not require reprogramming.

The repair procedure involves selectively erasing and reprogramming the Cummins CM551 Engine Control Module (ECM) with new software (calibration versions: 56T13, 59T6). There is no change to the JTEC PCM software.

CATEGORY 19 STEERING

TSB#	MODELS	SUBJECT/DESCRIPTION
19-04-00 06/09/00	‘94 - ‘00 (BR)	*Squeaking/creaking sound in steering column while turning.* This bulletin applies to vehicles equipped with non-tilt steering columns. A squeaking/creaking sound may be heard coming from the area of the steering wheel while turning. The sound is associated with rotation fo the steering wheel or may be heard while going over bumps in the road. The repair involves installing new lock housing attaching screws.

CATEGORY 21 TRANSMISSION

TSB#	MODELS	SUBJECT/DESCRIPTION
21-02-00 03/10/00	‘99 - ‘00 (BR)	*47RE transmission-delayed upshift or no TCC engagement between 30 and 50 MPH.* This bulletin applies to vehicles equipped with a federal market 5.9L-24V diesel engine and built between March 2, 1999 and October 1, 1999. The customer may experience a condition where the transmission may seem to have a delayed 3-4 upshift, while moderately accelerating from 30 to 50 MPH. The customer may also note high engine rpm’s while operating in third or fourth gear. This condition may be caused by a delay in the engagement of the transmission torque converter clutch (torque converter lockup). The repair involves the replacement of the transmission valve body upper housing separator plate.
21-04-00 06/30/00	‘96 - ‘99 (BR)	*Erroneous MIL illumination for P1763 – Transmission Governor Pressure Sensor Volts Too High.* Some vehicles may exhibit a MIL illumination with a Diagnostic Trouble Code (DTC) of P1763 – Transmission Governor Pressure Sensor Volts Too High. The vehicle operator may experience slower than normal vehicle accelerations because the transmission may have temporarily entered its third gear “limp-In” mode as a result of the DTC. The “Limp-In” mode may last until the vehicle owner cycles the ignition key. The technician may not detect a problem with the automatic transmission during a diagnostic test or test drive. The MIL is caused by an increase in hydraulic pressure. The increased hydraulic pressure is the result of a new valve body machining process, which entered into production January 1, 1998. This condition will occur most often with vehicles that were built between January 1, 1998 and December 18, 1998. Vehicles built prior to January 1, 1998 may also experience this condition if the valve body or the transmission assembly is replaced with components built after January 1, 1998.

CATEGORY 21 TRANSMISSION...*Continued*

This bulletin involves selectively erasing and reprogramming the JTEC Powertrain Control Module (PCN) with new software.

21-08-00 09/01/00 — ‘99 - ‘00 (BR)

47RE delayed TCC lock-up and/or MIL P1740 – TCC or O/D Solenoid Performance.
This information applies to vehicles build for the California market (NAE), equipped with a 5.9L-24V diesel engine and built between March 2, 1999 and October 1, 1999.

The customer may experience a delayed torque converter clutch engagement (lock-up). This condition may illuminate the Malfunction Indicator Lamp (MIL) due to Diagnostic Trouble Code (DTC) P 1740 – TCC or O/D Solenoid Performance. In some situations, the customer may describe the condition as a lack of a transmission shift (TCC lock-up) between 30 to 50 MPH.

The transmission valve body upper housing separator plate was revised, with a wider (0.470 inches) slot in the lockup vent circuit, to improve fluid flow in the torque converter clutch. This bulletin involves the replacement of the transmission valve body upper housing separator plate.

21-12-00 09/15/00 — ‘00 - ‘01 (BR)

Tapping/knocking sound during idle.
This bulletin applies to vehicles built before May 10, 2000, equipped with an automatic transmission. A tapping/knocking sound may be heard or felt in the driver side floor pan area during idle conditions. With the engine running at an idle, listen for knocking sound coming form the driver side floor pan area. If a tapping/knocking sound can be heard, replace the shift linkage with revised parts.

CATEGORY 23 BODY

TSB#	MODELS	SUBJECT/DESCRIPTION

23-03-00 02/04/00 — ‘00 (BR)

Vehicle Identification Number (VIN) Plate Relocated
The VIN plate on the subject model vehicles has been relocated from the instrument panel to the cowl bar. Due to the relocation of the VIN plate, the windshield frit (the frit is the black-out band at the bottom of the windshield) required a change so that the VIN plate could be seen through the windshield. The view of the VIN plate may be blocked if a 1999 or earlier windshield is installed on the vehicle.

Do not install or have class suppliers install 1999 or earlier windshields on 2000 model year subject model vehicles. Likewise, do not install or have glass suppliers install 2000 or later windshields on earlier models.

23-19-00 05/05/00 — ‘94 - ‘01 (BR)

Instrument panel creak.
A creak or squeak may be present near the left and/or right side(s) of the instrument panel. The noise is caused by the sheet metal joint between the A-pillar and the dash p0anel plenum lower rubbing together. The repair involves loosening that instrument panel and providing additional clearance between the A-pillar inner panel and dash panel.

23-25-00 06/30/00 — ‘97 - ‘01 (BR)

Paint fogging/whitening.
Painted surfaces of the vehicle that are covered for extended periods of time with front end covers (bras), transit films or magnetic signs may appear to have a white “milky” spot on dark colors, or a fogging, coffee colored spot lighter colors. The repair involves removal of a fogging or staining condition from any painted surface where moisture may be trapped under the clear coat by using a heat gun.

TSB's Issued During '01

CATEGORY 2 FRONT SUSPENSION

TSB#	MODELS	SUBJECT/DESCRIPTION
02-001-01 1/19/01	'94 - '01	*Rear of vehicle sits too high to allow hook up to a fifth-wheel trailer.* This bulletin applies to 2500 and 3500 4x4s. The curb hight lowering package is designed to reduce the rear spring spacer block by 1 7/8 inch, which will lower the rear of the vehicle by several inches proving clearance so that most customers can attach their fifth-wheel or goose neck trailer to the trailer hitch turntable.

CATEGORY 5 BRAKES

TSB#	MODELS	SUBJECT/DESCRIPTION
05-002-01 3/9/01	'01	*Parking brake pedal adjustment.* This bulletin applies to 2500/3500 series Ram trucks with four-wheel disc brakes, built before November 20, 2000. Parking brake cable appears to be mis-adjusted, which may cause the parking brake lamp to remain illuminated even after the parking brake pedal has been released. The parking brake system, however, is not mis-adjusted and functions normally. Install new parking brake cables.

CATEGORY 8 ELECTRICAL

TSB#	MODELS	SUBJECT/DESCRIPTION
08-010-01 5/25/01	'94 - '02	*Airbag/clock spring service.* When servicing any airbag system, it is essential to follow the proper Service Manual and/or Diagnostic Manual procedures for diagnosing, testing, and replacing of any component. Do not use silicone or any other lubricant spray on or near the clock spring. Lubricants are often used in the clock spring area of the steering column to eliminate noise. Any repair that may disrupt the positioning of the steering wheel with the front wheels will require that the clock spring be centered. This includes clock spring replacement, steering column service, HVAC service, steering gear service, and front suspension crossmember service.

CATEGORY 9 ENGINE

TSB#	MODELS	SUBJECT/DESCRIPTION
09-002-01 03/02/01	'98 - '01 (BR)	*Exhaust manifold bolt retention straps.* This bulletin applies to vehicles equipped with a 24-valve diesel engine built on or between engine serial number 56419738 and 56777585, with a date of engine manufacture from January 01, 1998 to September 22, 2000. This information is available on the engine data plate, which is located on the left side of the engine, affixed to the side of the timing gear housing. Vehicles that are used for extended heavy trailer hauling purposes may experience a loss of exhaust manifold bolt torque. This condition may lead to exhaust gas blow-by past the exhaust manifold gasket(s) and even loss of exhaust manifold bolts. A new exhaust manifold bolt retention strap has been released as a means of locking the outboard exhaust manifold bolts in place. This will prevent bolt rotation and torque loss during the thermal expansion and contraction cycles of the exhaust manifold.

CATEGORY 9 ENGINE...*Continued*

09-001-01 '01
1/19/01

Intermittent loss of oil pressure sensor ouput voltage.
This bulletin applies to 2500/3500 diesels with engine serial number 56744083 to 56809910. The output voltage of the oil pressure sensor may intermittently dropout. This condition may cause the engine oil pressure gauge needle to erroneously indicate lower than actual oil pressure. A warning chime may sound and the "Check Gauges" lamp may illuminate. The Engine Control Module (ECM) software has been revised to address this condition. Replacing the oil pressure sensor will not correct this condition.

09-003-01 All
5/4/01

Engine oil additives/supplements.
Engine oil additives/supplements (EOS) should not be used to enhance engine oil performance. Engine oil additives/supplements should not be used to extend engine oil change intervals. No additive is known to be safe for engine durability and can degrade emission components. Additives can contain undesirable materials that harm the long term durability of engines. Generally it is not desirable to mix additive packages from different suppliers in the crankcase; there have been reports of low temperature of low temperature engine failures caused by additive package incompatibility with such mixtures.

CATEGORY 18 VEHICLE PERFORMANCE

TSB#	MODELS	SUBJECT/DESCRIPTION

18-31-1 '98.5 - 2002 (BR/BE)
New Release

Cold idle engine warming.
This bulletin involves selectively erasing and reprogramming the Engine Control Module with new software. This bulletin applies to all Ram trucks built after December 17, 1997 equipped with the 24-valve 5.9L Cummins diesel engine.

Extended idle operation, especially in cold weather, can allow varnishes/oils to condense on the exhaust valve stems, leading to stuck valves, and damaged valve train components. The repair procedure involves calibration software that will activate when certain parameters are met, reducing the chance of valve sticking as well as improving cab heat warm-up time. Idle speed will slowly ramp up from 800 rpm to 1200 rpm when all of the following conditions are met:

- Intake Manifold Temperature less than 60°C (32°F)
- Coolant Temp is less than 60°C (140°F)
- The transmission is in Neutral or Park
- The Service Brake pedal is not depressed
- Throttle = 0%
- Vehicle Speed = 0 mph

If intake manifold temperature (IMT) is less than -9°C (15°F), three of the cylinders will be shut off upon reaching 1200 rpm, creating a slight change in engine sound which is normal. Thus the engine has to work to overcome the three "dead" cylinders. This allows the engine to create increased heat in the cooling system, allowing more rapid warm up.

Either feature will abort when any one of the following occurs:

- The automatic transmission is placed in gear (forward or reverse)
- The service brake pedal is depressed
- Throttle position is greater than 0%
- Vehicle speed greater than 0 mph
- Coolant temperature is greater than 79°C (175°F)

CATEGORY 21 TRANSMISSION

TSB#	MODELS	SUBJECT/DESCRIPTION
21-004-01 02/16/01	'01 (BR)	*Overdrive disabled to improve transmission reliability during cold temperature operation.* This bulletin applies to vehicles equipped with an automatic transmission where the vehicle was built on or between June 26, 2000 and December 23, 2000, and the PCM software level is earlier (lower) than calibration 14 for model year 2001. Quality analysis has determined that insufficient lubrication of certain internal transmission components may occur when a vehicle is operated in temperatures lower than -20°C (-5°F). This condition may be caused by the automatic transmission fluid (ATF) freezing in the cooler lines and interrupting the flow of lubricating oil (ATF) to the transmission overdrive unit. This condition should be a concern only in areas where very cold ambient temperatures of -20°C (-5°F) are experienced. The revised software will not allow 4th gear overdrive to occur if ambient temperatures are less than -20°C (-5°F). The revised PCM software has been implemented to improve transmission reliability. The customer should be informed that reduced fuel economy would be expected when overdrive is not in use. The repair involves selectively erasing and reprogramming the Powertrain Control Module (PCM) with new software (calibration level 01Cal14).

CATEGORY 25 EMISSIONS

TSB#	MODELS	SUBJECT/DESCRIPTION
25-001-01 1/19/01	'01 (BR/BE)	*Generic Scan Tool May Not Display Certain DTC's and Erroneous LDP Switch.* This bulletin applies to vehicles with an RE automatic transmission built before January 12, 2001 (MDH 0112XX). A generic scan tool may not display certain Diagnostic Trouble Codes (DTC) when a Malfunction Indicator Lamp (MIL) illuminates. The PCM software must be updated to calibration level 0lCall4A.
25-002-01 1/19/01	'01 (BR/BE)	*Scan Tool Erroneously Displays P000 For DTC's P1740 And P0461.* This bulletin applies to vehicles with an RE automatic transmission built before January 31, 2001 (MDH 0131XX). A Generic Scan Tool or an Enhanced Scan Tool, like the DRB III, may erroneously display certain Diagnostic Trouble Codes (DTC) as P0000. As a result, the scan tool may display Freeze Frame data incorrectly. The PCM software must be updated to calibration level 0lCall4A.

RECALL NOTICES

OUTER DASH SILENCER PAD AND HEAT SHIELD SAFETY RECALL (737)

The outer dash silencer pad, on the below listed vehicles, may contact the exhaust pipe. Under certain operating conditions, the exhaust pipe may become not enough to over heat or ignite the silencer pad. To correct this condition, part of the silencer pad must be removed and a heat shield must be added to the exhaust pipe.

Models: 1997 model year Dodge Ram (BR) trucks equipped with a 5.9L diesel engine ('D' in the 8th VIN Position) built at the:

- Saltillo Assembly Plant ('G' in the 11th VIN Position) from March 7, 1997 through May 15, 1997
- St. Louis North Assembly Plant ('J' in the 11th VIN Position) from March 15, 1997 through May 16, 1997
- Lago Alberto Assembly Plant ('M' in the 11th VIN Position) from March 18, 1997 through May 15, 1997

The service/repair procedure involves removal of a portion of the silencer pad and the installation of heat resistant foil tape to the remainder of the silencer pad and the installation of a heat shield onto the exhaust pipe.

IGNITION SWITCH WIRING RECALL (875)

The ignition switch and/or steering column wiring may overheat when the blower motor is operated at high speed for an extended period of time. This can cause stalling, loss of blower motor or power window operation, ABS or airbag lamp illumination or a steering column/instrument panel fire.

The vehicles involved in the recall have a vehicle identification number as follows:

- Warren ("S" in the 11th VIN position) through April 4, 1996;
- St. Louis ("J" in the 11th VIN position) through March 23, 1996;
- Lago Alberto ("M" in the 11th VIN position) through April 14, 1996;
- Saltillo ("G" in the 11th VIN position) through April 14, 1996.

The repair involves installing a blower motor relay and overlay harness to remove the blower motor circuit from the ignition switch. In addition, the ignition switch and electrical connector must be inspected for damage and replaced if necessary.

Note to TDR subscribers: the primary parts package for this repair does not include a replacement ignition switch assembly, but rather provides a blower motor relay and overlay harness; if necessary, an ignition switch wiring pigtail; clips, screws, washers, etc., to install the blower motor relay.

During the repair the ignition switch and associated connectors are to be inspected. The technician is instructed to look for indications of melting or deformation, specifically at terminals four and five. Very few vehicles are expected to require ignition switch replacement.

Editor's note: The title of the recall, "Ignition Switch Recall 875" leads one to conclude that the recall is to replace the ignition switch assembly. As summarized from the dealer service instructions, the recall has very little to do with the ignition switch, but rather is focused on adding a relay to the blower motor circuit. The moral of the story – don't jump to conclusions based on the title of a memo and be sure additional trailer light wiring and accessories that are added to your vehicle are on a separate relay-switched circuit.

FUEL TRANSFER PUMP RECALL (878)

The fuel transfer (lift) pump on about 12,000 24-valve vehicles may be susceptible to premature internal armature shaft bushing wear. Failure of the shaft bushing typically causes a no-start condition. To correct the problem, the supplier of the fuel transfer pump (Federal Mogul) has returned to the original sintered iron bushing design.

The suspect vehicles have a Cummins engine serial number sequence that falls between 56662576 and 56671920. These engines were installed at the DaimlerChrysler assembly plant in St. Louis from 12/3/99 to 1/18/00; Lago Alberto from 12/2/99 to 2/1/00; Satillo from 12/2/99 to 2/1/00.

The replacement involves removal of the starter motor to gain access to the electronic transfer pump. Remove and install a replacement pump. Reinstall the starter and check for leaks and proper operation. The flat rate time schedule for replacement is approximately one hour.

THROTTLE CONTROL CABLE AND THROTTLE LINKAGE REPLACEMENT SAFETY RECALL (970)

DaimlerChrysler Corporation has determined that a defect, which relates to motor vehicle safety, exists in some 1994 through 1996 model year Dodge Trucks equipped with a Cummins Turbo Diesel engine (identified by a "C" in the eighth position of the VIN).

The throttle control cable on your Ram truck may fray and eventually break. A frayed throttle control cable may not allow the throttle to return to the idle position.

In addition, the throttle control linkage joints may corrode and cause the throttle to bind or stick.

Either of the above conditions could increase the truck's stopping distance and cause an accident without warning.

DaimlerChrysler will repair your truck free of charge (parts and labor). To do this, your dealer will replace your truck's throttle control cable and throttle linkage. The work will take about 1.0 hour to complete. The service/repair procedure

involves removal of the throttle control cable, throttle linkage rod ends and linkage ball studs as all of these parts are replaced. Detailed removal and reinstallation instructions are provided to the dealership (reference Safety Recall 970).

If you have already experienced the problem described above and have paid to have it repaired, you may send your original receipts and/or other adequate proof of payment to the following address for reimbursement: DaimlerChrysler Customer Assistance Center, PO Box 1040, St. Charles, MO 63302-1040, Attention: Recall Center.

UPPER CONTROL ARM FASTENERS
(Recall 955)

2001 BR/BE Ram Truck Quad Cab manufactured in July 2000.
The upper control arms attached with cadmium coated nuts can cause the bolts to stretch due to the application of a higher than specified clamp load. Breakage of the upper control arm fasteners could cause the axle to rotate forward under braking conditions. This rotation could twist the steering linkage and possibly separate the brake lines, increasing the risk of a crash. Dealers will replace the upper control arm bolts and nuts.

REAR AXLE SPACER PLATE
(Recall 966)

2001 (BR/BE) Dodge Ram Truck Quad Cab equipped with a camper package and overload springs manufactured in July 2000.
The rear axle spacer plate could lead to deformation of the upper spring plate during assembly of the axle to the vehicle resulting a soft joint. The soft joint could cause the rear axle U-bolts to lose clamp load, resulting in displacement of the rear axle and a loss of vehicle control. This could increase the risk of a crash. Dealers will remove the spacer plates and the spring plates will be replaced.

I wonder if this repowered truck has any TSBs.
The truck is a 1947 custom built Dodge.

THROTTLE CABLE
(Recall 970)

1994-1996 (BR/BE) Dodge Ram Truck with diesel engine manufactured from July 1993 to July 1996.
On certain pickup trucks, the throttle cable could unravel (fray) or break, resulting in a loss of throttle control. A throttle that does not return to idle could result in unexpected acceleration, increasing the risk of a crash. Dealers will inspect and replace the throttle cable and upper bell crank lever.

BRAKE HOSE/ABS SENSOR WIRE ASSEMBLY CLEARANCE
(Recall 971)

2000 (BR/BE) Dodge Ram Truck with ABS manufactured from July 1999 To September 1999.
Some vehicles may have inadequate clearance between the front tire/wheel and the brake hose/ABS sensor wire assembly. During full lock turns, it is possible for the tire or wheel to contact the brake hose/ABS sensor wire assembly. This could ultimately result in wire damage and/or a hole in the brake line, affecting brake effectiveness, increasing the risk of a crash. Dealers will replace the front brake hose assemblies, and the ABS sensor wire will be inspected and replaced if necessary.

CLOCKSPRING
(Recall 982)

2001 (BR/BE) Dodge Ram Truck manufactured from May 2000 To October 2000.
Sound deadener material internal to the clockspring could become detached from the clockspring cover and housing. When this occurs, the material could interfere with the clockspring ribbon and cause an open circuit. The driver air bag system will become disabled and the air bag warning lamp will illuminate on the instrument panel. Dealers will replace the clockspring assembly.

CONCLUSION

Wow, what a listing of information! Thanks, again, to the TDR members that forward information to us. Also, thanks to those at DaimlerChrysler and Cummins that provided their insight.

Is the grass greener on the other side? We hope the TSB and Recall information will help you in your purchase/ownership of the Dodge Cummins Turbo Diesel truck. We choose to think that answers and solutions are much better than wonderment. Happy Motoring!

TURBO TIPS

The following is a collection of tips, minimal cost modifications, and solutions found by Dodge/Cummins Turbo Diesel owners in real-life operation of their vehicles. It is gleaned from previous issues of the* Turbo Diesel Register*, and is sometimes edited for brevity and clarity. The categories in this harvest of hints follow the system of classification used in Dodge's Technical Service Bulletins.

3 REAR AXLE

TDR member John Holmes gives some tips for ensuring that rear differential lube is at the proper level following a differential oil change. Jack up each side of the rear axle for five minutes each to ensure that oil reaches the axle bearings, then lower the truck to a level floor and check the fluid level. Add additional fluid as necessary to complete the fill.

On some trucks with heavy-duty suspension and overload springs, suspension noise from the overload springs slapping the frame stop can be annoying. Slip and tighten a plumber's pipe connector over the end of the frame stop. A plumber's pipe connector is a 3" diameter rubber tube about 4" long and about 3/8" thick with a stainless steel hose clamp on each end. It is available at plumbing supply shops or stores such as Home Depot for about $4.00 each. *Frank Howatt*

Another method to cure overload spring slap is to cut and fit a piece of old tire carcass to the overload spring end, using one clamp to attach it at the axle end only. The cost is less than a dollar per side. *John Holmes*

7 COOLING

1989 and '90 Turbo Diesels were not equipped with an air-to-air intercooler. These trucks tend to run hot in the summer on long pulls. Member Tom Clayton used a section of 4" aluminum dryer vent hose to direct cool air from the front of the truck onto the turbocharger area. He also installed a revised Cummins thermostat P/N 3802273, which further improved engine cooling.

To protect the cooling system from bugs and debris, insert an old aluminum-framed window screen behind the grille and ahead of the radiator, or simply cover the radiator with window screen material. Then a few taps of the hand will remove the collected bugs. This quick fix provides a free or almost free preventive maintenance solution.

For extreme cold weather operation if you install a winter-front radiator cover on your truck, it must have a minimum one square foot opening in its center for radiator and intercooler airflow. This tip is from the Cummins, 5.9 Liter Engine Operation's Manual.

The correct type of antifreeze/coolant to use in your Turbo Diesel is an ethylene glycol- (not propylene-) based product. If possible, use a low silicate, diesel-type of coolant. It should be mixed fifty-fifty with distilled water. Or you can buy a pre-mixed product. But if you "mix your own", be sure to mix thoroughly before pouring it into the cooling system.

8 ELECTRICAL

On '89-93 trucks, the voltage regulator seemed to fail too often. Member Earl Peck solved the problem by relocating the regulator to the front of the hood pivot assembly on the left side of the engine, away from all the engine's heat. His regulator hasn't failed since. On second generation trucks, Dodge redesigned the system, and the regulator is integral with the alternator and it is not a problem.

On some maintenance free batteries it is possible to check the electrolyte level. If the case is transparent or white plastic, shine a flashlight on the case while looking at the other side of the case. The liquid level will clearly show. Try this in a garage or other low-level light situation. *David Burton*

9 ENGINE

If you need to turn the engine over to locate Top Dead Center of a cylinder and lack the special tool to do this job, use a 22 mm socket wrench on the alternator pulley nut. Turn the engine backwards from its normal rotation (backward rotation for servicing is not a concern) to keep the pulley from slipping on the belt. Or put a socket on one of the crankshaft damper nuts and have an assistant turn the engine over from underneath the truck.

Member Ed Wash of Alaska wrote in to ask for a solution to oil dripping from the plastic pipe road draft tube under his engine. It is normal for a drop or two to come from this tube when the truck has been parked overnight.

A member solved the same problem by drilling a 1-1/4" hole in the lid of a large Rolaids jar, and drilling eight holes around the top of the jar body. Drill a horizontal hole at the bottom of the draft tube. Slide the lid over the hose and secure the underside with a tie wrap. Screw the jar onto the lid. It stops the drips! Keeps the driveway spotless.

If you have trouble reading the oil level dipstick without your glasses, put the dipstick in a vise and file a "V" notch in the side of the stick at the "full" mark and one at the "add" mark. Makes it much easier to read the oil level accurately. *Steve Richards*

Use a "Sidewinder" ratchet wrench (available at many chain auto parts stores) for fuel filter removal with a strap

wrench. The Sidewinder also keeps your hands clean when removing the oil pan drain plug. Barely loosen the plug with a standard 3/8" drive ratchet, then switch to the sidewinder and twist the “T” handle to avoid having hot oil run down your arm as the plug is loosened. *Edmund Turner, Jr.*

An easy and clean way to drain the engine oil is to loosen, but not remove, the drain plug. Oil will come out of the pan through grooves cut in pan sides if the plug is loosened by more than two turns. Then you don’t have to fish in the drain pan for the plug and gasket. *Louis Barnhart*

Oil changes become even simpler and cleaner with the addition of an inexpensive accessory called the EZ change drain plug, which replaces the standard drain plug. By screwing on a special hose/adapter at drain time, the plug’s drain valve automatically opens, and the draining oil is directed through a hose to the drain pan. Removing the drain tube reseals the plug. The plug kit is available from Geno’s Garage. Call 1-800-755-1715.

A way to loosen a tight oil filter or canister-type fuel filter is to take a long flat-blade screwdriver, place it on the filter rim at the proper angle and strike it several times with a hammer to drive the filter in a counter-clockwise direction. *Louis Sytsma*

It is easier to pour new oil into your engine if you make your wobble-proof funnel from a used plastic 1.75 liter Skol Vodka jug. It seems the spout diameter and lid threads are an exact fit to the oil fill opening and threads on your Cummins engine. *R.J. Stamper*

Member Scott Morneau adds that you can use the oil fill cap to test other potential bottles. If the oil fill plug fits the cap of the bottle, the bottle will likely fit in the oil fill port.

We are reminded that when changing engine oil, the new filter should be primed with clean oil (the filter will hold nearly a quart) before installation on the engine. This will cut the time the engine runs without oil pressure during its first start after the oil change. *Gus Hrncir*

Here’s a free pre-luber for your Cummins engine. If your engine is not run for long periods, or if you want to build oil pressure before starting it in cold weather, or after an oil change, disconnect the fuel shutoff solenoid wire and crank the engine for 15 seconds. Reconnect the wires and crank it again to start it. It’s an “almost free” solution if you add a switch in the cab to make raising the hood unnecessary. Excerpted from the Cummins Operations Manual, the tip applies to all the 12-valve engines.

Here’s the editor’s all-time favorite low cost service tip! When removing the oil filter, use a large heavy-duty freezer bag. After loosening the filter part way, slide the zip-loc freezer bag under and around the filter, then spin the filter off and let it drop into the bag. Zip-up the bag. No mess, and it is then easy to remove the filter from its crowded location. I will note, however, if your engine is hot, you may need to work fast or the filter could melt through the bag. *Justin Kirchhoft*

Another method is to drain the filter first by punching a small hole in its bottom before removing it. *Dave Lewis and James Johnson*

14 FUEL

In model years ’94 through ’98 the engines are equipped with a plunger-type fuel transfer pump with a button-type primer. It is hard to locate and see the plunger button to prime the fuel system. Paint the end of the plunger with a bit of white paint for greater visibility. *Jim Anderson*

With the introduction of the second generation trucks in ‘94, many members adapted to the decreased clearance problems in removing and replacing the fuel filter by using a filter strap wrench with a socket extension to remove the old fuel filter. The procedure is to disconnect the water sensor wire, thread the strap wrench under the wire and the drain tube onto the filter near the top, tighten the wrench strapping and loosen the filter. It is then spun off and removed by hand. Prime the new filter with clean fuel before installing it!

TDR member Earl Kenney cautions us about diesel fuel storage. Fuel stored in cans can collect water that may produce gels. Fuel stored for long periods in cans coated with galvanizing or zinc will liberate a chemical from the coating that can form harmful compounds, resulting in hard crystalline deposits in the injector system.

Worried about being in the middle of nowhere and running out of fuel? Cummins reminds us that the 12 valve B 5.9 engine will run on fuels besides #1 and #2 diesel and blends thereof. Alternate fuels include #1-K and #2-K kerosene; Jet A, Jet A-1, JP-5, and JP-8 jet fuels. Fuels not approved by Cummins are Jet-B, JP-4, and gasoline. Cummins stipulates that alternative fuels must be used only in an emergency and that the engine runs best and most efficiently on #2 diesel fuel.

On ’94 through ’98 12-valve Cummins engines there is a fuel pre-filter/heater that most mechanics don’t know about. It is located between the fuel tank and the fuel transfer pump, low on the engine left side near the rear. The bottom bowl screws off, and the plastic strainer screen should be cleaned periodically. Don’t forget to properly reseat the gasket before reinstalling the filter bowl. *Robert Patton*

If you damage or lose the fuel pre-strainer gasket during servicing, you have two alternatives: Purchase a kit from Dodge for $27.00 which contains the gasket, or go to an industrial rubber supply house and purchase a 2-3/4" x 3" x 1/8" rubber quad ring for less than $2.00. A perfect fit. *John Murry*

A card is available from Flying J truck stops which entitles you to a one-cent per gallon fuel discount, minimum 20 gallon purchase. The card is free, and application blanks are available at all Flying J locations.

18 VEHICLE PERFORMANCE

Interested in improving the highway fuel mileage of your Dodge? Joe Kubina, Aerodynamic Development Engineer at Chrysler Corp. says removing or laying down the tailgate on your truck will not improve fuel mileage, and in fact, could worsen it. It seems the Dodge body shape is designed to flow air properly across a closed tailgate to maximize highway fuel economy.

21 TRANSMISSIONS

Michigan TDR member Paul Refer wrote in to say his automatic transmission would not go into overdrive after a cold start in very cold weather. The editor pointed to the Owner's Manual that says, "If the vehicle is started in ambient temperatures of -5 degrees F or below, the overdrive will not turn on. This protects the transmission from damage if the cooling system freezes. Overdrive operation will resume when the ambient temperature has risen to approximately +2 degrees F."

If you tow or haul heavy loads with an automatic transmission, a transmission temperature gauge is a must. Reluctant to cut a hole in the oil pan to install the sensor? Member John Holmes tested a gauge/sender unit in which the sender is installed on the transmission oil dipstick. Slick – and it works! Available as a kit from Geno's Garage. Call 1-800-755-1715.

When installing a new automatic transmission pan gasket, or almost any other gasket that doesn't want to stay in place during the mating of the gasketed parts, spread a light coat of chassis grease on one surface and place the gasket on it. The gasket will then stay in place and be lined up for the rest of the installation. *Robert Patton*

When checking the oil level in your automatic transmission, it is important to follow the Owner's Manual directions that specify checking the level with the transmission in neutral, not in park.

Does the transfer case shift lever in your 4x4 truck buzz and vibrate? Remove the trim and cement a small piece of rubber inner tube to the shift gate in the 2H position. Alternatively, you can place a wire tie on the lever where it passes through the shift gate. *W.L. Mayo and Robert Patton*

In a standard oil change of the automatic transmission, only about five quarts of the old fluid can be drained out. To get a complete change (for example when switching to synthetic fluid), disconnect the transmission cooler line at the radiator, cut and fit a piece of hose to the coupler end and place the other end in a five gallon container. Put your truck in park with the brake on, and start the engine. ATF will flow into the container. As soon as the flow begins to dwindle, immediately shut off the engine. Reattach the cooler line, and refill the transmission with fresh ATF before restarting the engine. It may take up to 11 quarts. *Scott Dalgleish*

23 BODY

Charles Shields wrote in to say he had a problem with dust entering his instrument cluster through the odometer reset-button hole. He installed a small "O" ring on the button shaft, and now keeps a clean instrument cluster.

If your shoulder/seat belt buckle rattles against interior trim while driving, install a small piece of velcro on the back of the seat belt buckle/ trim where the buckle hits the trim. With the velcro the buckle will stay in place. *Robert Patton*

To remove bugs from the grille area, fill a spray bottle with one part diesel fuel, one part water, and a small amount of detergent. Shake well and apply, let it sit, then hose it off. *Tom Clayton*

Four-wheel drive, 2500 series Dodge trucks come with plastic rear wheel well liners as standard, while two-wheel drive trucks do not. The four-wheel drive liners can be used on two-wheel drive trucks with no modifications. They are available through Dodge parts for about $60.00 per set. The liners make cleaning easier and prevent mud and salt buildup in the fenderwells.

Do your outside rearview mirrors jiggle when going down the road? For trucks equipped with an aftermarket wind deflector/bugshield, start your troubleshooting by removing it. The same advice applies if your radio antenna whips about violently.

24 AIR CONDITIONING

Spray a disinfectant such as Lysol into the A/C vents occasionally to kill mold and odors.

26 MISCELLANEOUS

Here are several cleaning tips: After washing your truck, give it a final rinse using water from the hose without the nozzle on it. The solid stream results in fewer water beads on the waxed surface. Clean window glass with a mixture of ammonia and warm water applied with a cloth or sponge. Dry the glass with old newspaper pages. Cheap and effective! To clean your engine, use a solution of Simple Green in water. Spray it on a cold engine, let it sit briefly, hose it off. *Contributed by Don Mallinson and Robert Patton.*

Installing a pyrometer gauge in the exhaust provides the greatest accuracy in assessing exhaust temperature. Pyrometer temperature should read less than 300 degrees before shutting down when measured in the elbow after the turbocharger. Gauges are available from Geno's Garage. Call 1-800-755-1715. Extended idling over 10 minutes is not recommended by Cummins.

PREVENTIVE MAINTENANCE AREAS FOR DODGE TRUCKS

All vehicles develop maintenance problems that require special attention to prevent breakdowns or part failures. The following is a list of special areas on Turbo Diesel trucks that warrant attention. These items have been discovered through miles and miles of driving by the TDR membership. This list is categorized in the same classification as Dodge's Technical Service Bulletins. The list was compiled by TDR correspondent Jim Anderson. This is an excellent complement to Jim's research in last issue's Turbo Tips where he gave us a collection of low-cost solutions to common problems we encounter.

7 COOLING

Installing a piece of metal screening in front of the truck's radiator is strongly recommended. With three radiators (engine cooling, air-to-air intercooler, air conditioning condenser) it is important to have maximum airflow and minimum clogging due to bugs, chaff and dirt. The screen should also stop radiator penetration by rocks.

9 ENGINE

When changing the serpentine accessory drive belt, always check the idler tensioner pulley to make sure its bearing is good. The belt change interval is every 100,000 miles.

The turbocharger to intercooler to intake manifold piping clamps can come loose, causing loss of turbo boost. Check all rubber boots and clamps periodically for boot slippage under the clamps, particularly if a loss of performance or a whistling noise is noticed while the engine is under load.

Periodically inspect the engine water pump bearing for leakage. If any coolant is seen to drip or "weep" from the pump shaft area, replace the pump before it fails.

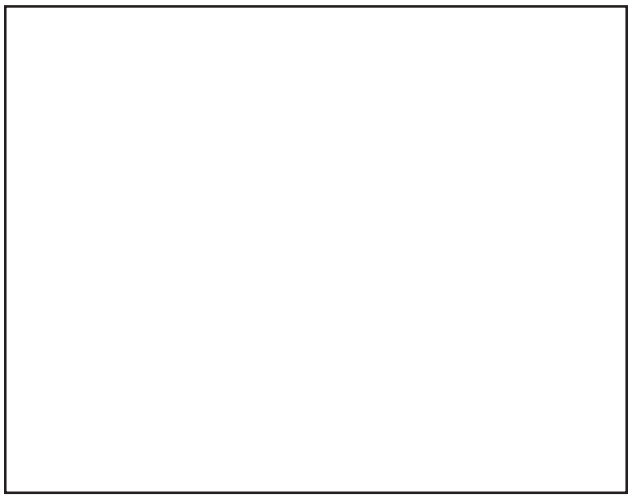
14 FUEL

Trucks using an aftermarket remote-mounted fuel filter have experienced abrasion of one or both hoses where they have contacted engine parts, other underhood parts, or each other. Cover both lines with convoluted loom or rubber hose and route them in such a manner that they don't touch anything.

A few '97 trucks equipped with the remote-mounted, aftermarket, Prime-Loc fuel filter have experienced cracking of the bolt which holds the adapter to the Cummins fuel filter mount boss. This results in serious fuel leakage. Either replace the standard bolt with a modified bolt or check frequently for fuel leakage.

The fuel filter element should be changed at every other oil change or every 12,000 miles. Always prime the fuel filter before placing a new one on the engine. Then follow the procedure for bleeding the remaining air from the fuel filter assembly prior to starting.

On all 12 valve engines with the P-7100 injection pump (all '94-'98.5 trucks), a fuel return line runs from the engine side of the injection pump (near the front of the pump) to return unused fuel to the fuel tank. Part of the line is rubber. This rubber line, hidden under the intake manifold, is subject to heat deterioration and should be replaced approximately every 50,000 miles. (This problem has been well documented in the TDR. Issue 19, page 26, has the best write-up. See the picture below.)



Look closely for the problematic fuel return line.

All rubber fuel lines, both supply and return, should be checked periodically for integrity. Some lines can leak fuel, or admit air to the system, or cause loss of prime and resultant hard starting.

Starting in 1994 the Cummins engine is equipped with a pre-strainer/fuel heater. It is located low on the left side of the engine in the fuel line before the fuel transfer pump. The strainer should be removed for inspection by unscrewing the bottom bowl of the unit. The strainer should be cleaned/checked at least every 40,000 miles or more often if contaminants clog your primary fuel filter. This strainer is not shown in any Cummins parts books. It has been the culprit for many complaints of low power as it performs its designed task of screening the fuel prior to the primary fuel filter.

16 PROPELLER SHAFT AND U-JOINTS

Trucks with two piece driveshaft systems (extended-cab trucks) can experience a vibration when towing a heavy load at engine peak-torque RPM in lower gears. The vibration lessens, and then disappears, as engine speed builds. This vibration is caused by the center carrier bearing being moved sideways against the bearing carrier frame, and is considered normal.

18 VEHICLE PERFORMANCE

All 4x4 trucks built after 1994 use engine vacuum to engage the front axle drive. Periodically inspect the vacuum hoses going to the front axle for holes, abrasions, and splits. A damaged vacuum hose will prevent the front axle from engaging when the 4x4 lever is shifted in the cab.

19 STEERING

A steering "clunk" in two wheel drive trucks produced after 1993 can be traced to lube pushing out of the telescoping steering column parts into the rubber boot on the shaft. Squeezing the boot to push lube back into the splined area is a temporary cure for the "clunk." A replacement steering shaft/coupler is a long-term solution.

In 4x4 models, a "clunk" similar to that found in two-wheel drive trucks may be caused by faulty track-bar bushings or worn front suspension grease joints.

"Groaning" and other front suspension noises on 4x4 models built prior to 1994 can sometimes be traced to the universal joints at the outboard axle ends of 4x4 models. A simple test is to engage the manual locking hubs and drive the vehicle. If the noise disappears, replace one or both joints.

On 4x4 models, a front-end shimmy may be caused by a worn steering stabilizer unit. This horizontally mounted shock absorber should be periodically replaced as a wear-out item. This problem appears more frequently on trucks equipped with aftermarket tires and rims of a larger than standard size.

During servicing, don't forget to check the fluid level in the power steering pump. It is located low on the driver's side of the engine near the front in a location covered by hoses and wires.

21 TRANSMISSIONS

The cooling lines for automatic transmissions can have a point of close contact with each other where they cross near the bellhousing. A piece of convoluted loom or rubber hose placed on one of the lines will prevent chafing and wearing through of the metal tubing.

All trucks built prior to 1998.5 and equipped with the NV-4500 five-speed manual transmission have a problem with fifth gear coming unpinned from the mainshaft. A revised nut and crush washer have been developed to cure this problem, along with a 14 page Dodge Factory, Tech Service Bulletin outlining the proper repair procedure and special tools needed.

Trucks equipped with the five-speed manual transmission are prone to excessive gear lash in the driveline. This can cause hard "jerking" when the throttle is suddenly lifted, particularly when hauling or towing heavy loads. This condition is normal. In addition to gear lash, the rubber-bushed drivetrain windup is partially responsible.

Draining and refilling the automatic transmission oil pan is not fun for the backyard mechanic because the pan cannot be drained before removal. B&M offers a drain plug that can be inexpensively installed in the pan to make fluid and filter changes easier and cleaner. The plug is available from Geno's Garage.

In vintage '94 to '98 trucks with automatic transmissions, cooling lines have plastic quick-disconnect couplers that can fail under high heat conditions, causing a loss of transmission fluid. A revised coupler is available from Dodge parts. Or you can make your own, using weatherhead brass fittings of the appropriate size, available at most auto parts stores. The fittings are listed under the trade name Dana/Weatherhead 68x8x4. Caution: we have seen reports that the "hard" fittings can cause stress cracks in the transmission line due to vibration.

When draining the lube from five-speed manual transmissions, remove the PTO cover from the side of the transmission. Start with the bottom bolt as it acts as a drain plug. Refill with synthetic gear oil in 75W-90 or 80W-90 weights with a GL-4 rating.

Often members will ask about the GL-4 rated Castrol Synthetic gear lubricant (75W-90) specified for the five-speed NV4500 manual transmission. If the GL-4 classification is good… shouldn't a GL-5 rated lubricant be better? It may seem reasonable, but in the case of the NV4500 gearbox, not necessarily so. The GL-5 oil contains twice the amount of sulfur/phosphorous additive package as GL-4. At high temperatures, the phosphorous plates out and reduces the coefficient of friction of the synchronizer rings (New Venture Gear has seen this on shift stand tests). Since there's twice as much of it, there's more of a detrimental effect compared to GL-4.

23 BODY

Because a diesel engine vibrates more than its gasoline engine counterpart, all fasteners should be checked periodically for tightness. Also, body fasteners and bracket fasteners, which might vibrate in sympathy with engine vibration, should be checked for tightness.

If the GL-4 classification is good…
shouldn't a GL-5 rated lubricant be better?

MECHANIC'S TIPS

Here's a collection of tips to help the mechanic/handyman while working on his or her vehicle. These tips have been collected by the editor over a period of years from many different magazines and other sources, and have been organized into categories for easier reference.

WORK ENVIRONMENT

First, here are some tips from the pros about your work environment.

- Never wear rings or other jewelry while working on your vehicle. Jewelry can scratch paint, get caught in turning belts, cause wiring short circuits, and otherwise ruin your day!
- Keep your work area and tools clean, neat and organized. That way things will be easier to find when needed, and safer to use.
- Wipe up floor spills before you slip and fall. Keep tools free of grease and oil so your hands won't slip off.
- Place removed parts in a safe place so you won't trip over them while moving around the vehicle.
- Provide proper light for a better quality repair.
- Provide adequate ventilation if you are using chemicals or fuel as a solvent.
- Adequately support the vehicle on jack stands if you are working underneath it. Use jacks and chains to support or move heavy loads.
- Never put a tool back in the toolbox without first cleaning it to be ready for the next use.

VEHICLE TRIM

If your pickup has a top over the bed, wedge a section of foam pipe insulation across the bottom of the bed where the tailgate closes against the bed. This will keep most dust and water out of the bed interior.

If you install carpet remnants in your cab or truck bed, you'll soon find that the cut edges will fray. To keep the edges looking neat, lay the carpet on a concrete floor, lay a piece of metal 1/8 inch from the edge, then heat the carpet edge with a propane torch. Use care not to get the carpet too hot as you simply want to melt the synthetic fibers enough to seal the edge from unraveling. This tip will not work on carpet with all-natural fibers. Practice on a scrap piece first.

Wrap a fingertip with duct tape,
glue side out...

TAKE IT OFF

When you disassemble any piece of mechanical equipment, you will end up with a bunch of random fasteners and pieces, and can easily forget your re-assembly order, or you can lose one or more fasteners. Use several small plastic tubs to hold stuff, and/or a large plastic tray where parts and fasteners can be laid out in the order they were removed. Just turn the tray around for re-assembly in order. If you leave your worksite, cover the tray or tubs with plastic food wrap to keep things from being disturbed. For long-term disassembly a freezer bag marked with the content description is a good alternative.

STUBBORN FASTENERS

If your screwdriver slips off a Phillips or slot head screw when you try to loosen it, put a bit of grinding compound in the slots to increase the screwdriver's grip on the fastener.

Another method is to strike the end of the screwdriver with a hammer while twisting it to break the fastener loose. This works particularly well on aluminum fasteners, or with steel fasteners in aluminum. Better yet, purchase an impact screwdriver to properly loosen those stubborn fasteners.

If you are trying to install a screw in an inaccessible place, tape the screw to the screwdriver point, insert the screw in its hole and turn it in. The tape will eventually fall off. A dab of grease or body putty may hold a light screw the same way.

Want to prevent a fastener from rusting after it has been installed? Simply coat the head with clear nail polish.

Clear nail polish also works as a thread locker. Coat the threads, then quickly install the fastener.

For removing rusty nuts and bolts, always use penetrating oil first, and let it soak a bit before trying to break them loose.

If you're trying to fish a part or fastener out of an inaccessible place, simply wrap some duct tape sticky side out around the end of a straightened coat hanger. It may take a couple of tries, but if the tape will stick to the part, the part will come out with the coat hanger. This works better than a magnet if you are working in an area full of metal.

Ever tried to hold a nut in a tight spot while threading a bolt into it? Wrap a fingertip with duct tape, glue side out, or make a loop of the tape to stick it to your fingertip, then place the nut on the tape. The nut will stay put and not rock around while starting the bolt threads.

ELECTRIC TIPS

When taping a bundle of wires together, coat the tape end with clear nail polish to keep it from coming loose.

If a vehicle battery is constantly boiling over, check and clean the ground from the alternator and/or voltage regulator to the vehicle frame. A poor ground connection will cause the alternator to put out too much juice. Measuring alternator output with a voltmeter may show it is putting out 14.8 volts or more, when it should charge at 14.2 volts.

When the rubber boot covering your positive battery terminal connector becomes worn, replace it with an old spark plug wire boot, or make a sleeve-type cover from an appropriate size plastic bottle.

Just a reminder, when replacing quartz halogen lights, use clean cloth gloves or otherwise cover the bulb with clean cloth or paper to prevent oil from your hands getting on the glass. Finger oils make the glass shatter under high heat conditions.

LUBE TIPS

Trying to pour oil or other fluid into a fill hole and don't have a funnel handy? Stick a screwdriver in the fill hole and pour the liquid down the screwdriver shaft. It will follow the shaft into the fill hole.

Need some good parts cleaning solution but hate to spend the bucks. Use old automatic transmission fluid. It will make greasy parts shiny- clean after an overnight soaking. Wash the ATF off with soapy water.

If you have a mysterious oil leak on your automatic transmission, check where the transmission dipstick tube goes into the case. You'll likely find a cracked "O" ring when you remove the dipstick tube. Replace the "O" ring for a quick fix.

FILTER TIPS

If your engine oil filter or fuel filter simply refuses to budge when you're trying to remove it, let the engine fully cool off, and it may be much easier to remove.

To make the job of removing your oil filter easier and neater, put on a pair of surgical gloves. They improve your grip and keep your hands clean. When the filter is off the vehicle, simply hold the filter top with one hand, and with the other pull the glove off your hand by turning it inside out over the top of the filter. Then oil can't get out of the filter opening!

A commonsense reminder: before installing a new oil or fuel filter, write the date and mileage on the filter with a marker to make remembering these vital details easier.

Also, before installing a new oil filter or a new diesel fuel filter, prime it with the appropriate fluid first. Get the filter as full as possible.

Have you found yourself with a difficult-to-remove oil filter? You tried, with no avail, the band wrench, strap wrench, and filter claw tool that you found at the auto parts store. You tried the screwdriver through the side of the filter trick – only to have the screwdriver twist in place? Your last resort… try a hammer and chisel to the top edge of the filter housing. Oh yeah, be sure to knock the chisel in the counter-clock wise direction as viewed from the bottom of the filter.

Best ever filter removal tip: once the filter is moved from its tool-tight position to a hand-tight removal, place a large freezer bag around the filter. Now, when it drops from the housing, extra fluid simply spills into the bag and not on the floor. Additionally, it is easy to retrieve the bag-filter from around the air-conditioning lines, as you don't have to worry about tipping/spilling oil.

EMERGENCY REPAIRS

Emergency repair of small holes in a gas tank can be made by rubbing a bar of soap across the hole. The leak will stop. A permanent repair can be made using epoxy.

Emergency temporary repair of small radiator leaks can be made by putting in two or three egg whites. Start the engine to circulate the coolant and get the egg to the hole. Oatmeal or flour may also work.

An emergency repair for a hole punched in your oil pan is to round the hole with a punch, then insert a rubber tire valve, stem first into the hole. Coat the valve with gasket cement if available. Push or pound it home with a hammer.

IN THE TOOLBOX

Plastic tie-wraps are so handy, almost everyone has them in the toolbox. Keep them organized by hanging a bunch on a single tie, then cut the head off the single tie. Friction will keep them in place. To get a new one, just slide it off the end. When cutting off old ties, cut them near the back of the head so they can be used again for a smaller project.

Most tool kits contain both metric and standard wrenches. Color code with paint or tape the wrenches of a certain type to make them easier to identify.

If your ratcheting socket wrench handle constantly bangs on nearby metal while in use, slip a piece of rubber tubing over the handle end to cushion it.

If you want to magnetize a screwdriver or other tool, stroke its tip with a magnet. If you want to demagnetize a tool, run the shaft or tip between the electrode arms of a soldering gun while it is turned on.

Slip a tube of closed-cell foam pipe insulation over your floor jack handle to keep it from damaging the paint on the body sides of your ride. Leave the top of the handle clear for a good grip.

Make an old dental pick a part of your toolbox. It has many uses, such as picking up small parts, scraping gasket material out of tight corners, cleaning grease out of cracks, and aiding in assembly of small parts.

Cleaning up your tools after a project is fast and easy with this tip! Spray them with carb cleaner, and then wipe them dry and clean before putting them away.

THRU THE LOOKING GLASS

If your wiper blades streak the windshield or otherwise act as if they are worn out, don't replace them. Just sand them! That's right, run a block with wet 600 grit paper along the rubber wiper edge for a few strokes to remove the small cut places in the blades, and they'll work like new.

If your windshield is badly streaked from worn out blades, polish out the streaks with toothpaste. Apply to a damp cloth and wipe back and forth across the affected area applying moderate pressure. Rinse off the residue when finished.

CLEAN YOUR RIDE

An easy-to-make bug scrubber that won't scratch paint can be made by wadding several pairs of old panty hose together and using it as a wet sponge. This also works to remove tar from chrome trim.

Tired of getting spray tire dressing all over your newly cleaned wheels? Make a cardboard template to hold over the rims and spray away!

It is likely you already have a great tar remover in your toolbox. Spray WD-40 on the tar, let it sit, then wipe the tar off. It won't hurt the paint, either!

If you want the interior of your ride to always smell fresh and clean, lay a bar of Irish Spring soap under the seat. If you want a different scent, a sheet of fabric softener works too.

Your truck is washed and it is time to dry it. Before you break out the towels/chamois, let's play a litlle bit longer and put the water to work drying the vehicle. Say what... Follow the procedure. Remove the spray nozzle from the hose. Starting at the roof, let the steady stream of water collect the drops and flow them off the surface. Move to the windshield, hood, windows, doors, cargo box, tailgate. The stream of water does a great job of drying your truck. Finish off the job with your towel.

CLEAN YOURSELF

A good way to clean your hands after a dirty job is to use soap and used coffee grounds. Just put some of each in your hand, add water, and then scrub 'till your hands are clean.

BODY WORK

When sanding inside curves, wrap sandpaper around an old piece of radiator hose or other thick walled hose of the correct diameter. You'll get a smooth material removal.

Planning to put a wild paint scheme or set of stripes on your truck, but you're not sure how it will look? Take some pictures of the truck, have them blown up to 8x10s, then use water-based colored markers to draw the different schemes on the pictures.

The indented bottom of a soft drink can makes a good place to mix up a small batch of two-part epoxy. The handle of a small plastic spoon or fork makes a good stirring stick and an applicator.

Old gaskets can be tough to remove from parts, even with a scraper. Chuck a wire wheel into your electric drill and brush them off clean. Be sure to wear safety glasses.

TAPE TRICKS

An easy way to keep grease from your hands and other dirt off new brake shoes during installation is to cover the shoe surface with masking tape. Remove the tape before you re-install the brake drums.

Masking tape or duct tape wrapped around the ends of the "U" joints on a driveshaft keeps the bearing caps in place while handling the shaft.

GET THE RIGHT SIZE THE FIRST TRIP

Determining the outer diameter of a piece of tubing or a bolt is easy. Just slip the appropriate size open-end wrench over the tubing, then read the size of the wrench.

MECHANICAL

When installing a gasket that refuses to stay in place during installation, put a light coat of chassis grease on the gasket's undersurface, then stick the gasket to the metal. It will now stay in place during assembly.

Put a light coat of chassis grease on the gasket's undersurface, then stick the gasket to the metal.

NEW OWNER'S CORNER....

Lube and service basics for your new truck. Always follow the recommendations in your Owner's Manual. Below are excerpts from the manual and further TDR commentary.

Breaking in your new truck: Drive moderately for the first 1,000 miles to assist in breaking in the powertrain, brakes, bearings, etc. Do not use full throttle for extended periods, and vary speeds frequently. After the first 1,000 miles, use the truck normally. Particularly during the breaking-in period, avoid extended idling. Your Cummins engine will break in faster if you haul or tow with the truck. The engine will not be fully broken in, and will not reach its full power and fuel mileage potential, until it has operated for approximately 10,000 miles.

Fuel: Use only #2 diesel fuel. As an option in winter you may use #2 diesel fuel blended with #1 diesel or kerosene, or #2 diesel otherwise treated to lower the pour point of the fuel. Use #1 diesel fuel for extreme cold weather operation only. Always fill at popular locations that sell a lot of fuel. Diesel that has not been subject to long storage should contain less moisture and sediment.

Engine Oil: Use any high quality lube oil diesel rated 15W-40 with the API "donut" symbol CH-4/SH or better, such as Cummins Premium Blue, Shell Rotella T, Chevron Delo 400. For very cold weather operation, you may use a diesel rated 10W-30, meeting the same API spec as above. Do *not* use synthetic oil if your engine has less than 10,000 miles on it.

Engine Fuel Filter: Fill the fuel filter with fuel before installation and purge all air from the fuel system before starting the engine. Issue 25, page 84, has the details on a 24-valve fuel filter change.

Change Intervals: Change your engine oil and oil filter according to the chart in your Owner's Manual. Change the fuel filter at every other oil change. Neither Dodge nor Cummins recommends using extended drain intervals with the use of synthetic engine oils. Change transmission and axle fluids according to the types of service listed in your Owner's Manual.

Anti freeze/Coolant: Drain and refill every 24 to 36 months, using low silicate, diesel-rated, ethylene glycol based coolant. Pre mix half-and-half with distilled water before installation or addition.

Automatic Transmission fluid: Change fluid and filter every 40,000 miles for normal operation. For operation such as towing or heavy loads, change every 15-20 thousand miles.

The latest Mopar specification is ATF +4, type 7176.
The latest ATF +4 can safely be used in all previous 47 RE/RH automatic transmissions. In this case, logic prevails – if +3 is good then +4 is better! This information was verified by D/C's customer advocate personnel. If you have any doubts about the correct transmission fluid, consult your Owner's Manual.

Five-Speed NV4500 Manual Transmission: Change every 30-50 thousand miles, depending on load. Use 75W-90, GL-4 or 80W-90, GL-4 rated synthetic oil. Often members will ask about the GL-4 rated Castrol synthetic gear lubricant (75W-90). If the GL-4 classification is good, shouldn't a GL-5 rated lubricant be better? In the case of the NV4500 gearbox, not necessarily so. The GL-5 oil uses twice the amount of sulfur/phosphorous additive package as GL-4. At high temperatures, the phosphorous plates out and reduces the coefficient of friction of the synchronizer rings (New Venture Gear has seen this on shift stand tests). Since there's twice as much of it, there's more of a detrimental effect compared to GL-4.

Although it does not affect the NV4500, the additional sulphur content of GL-5 attacks brass.

Six-Speed NV5600 Manual Transmission: This transmission is filled with manual transmission fluid at the factory. This fluid does not require periodic changing. If it is necessary to add or change the fluid in this transmission use Mopar manual transmission fluid (Mopar P/N 4874464 or Texaco 1874). These are the only lubricants recommended for use in the NV-5600 transmission.

Axle oil: Change every 30-50 thousand miles, depending on load. Use 75W-90, GL-5 rated synthetic oil for normal light to medium load duty cycle.

Tires: Weekly, check for proper air pressure with tires at ambient temperature. Follow the Owner's Manual recommendations for increasing pressure as load increases. Front: 45-55 lbs. Rear: 40-80 lbs.

Cold Starting: Turn on key, and when "wait to start" light goes out, start the engine. You may need to apply light throttle (up to 1,000 RPM) to keep the engine running if it is very cold. Allow two or three minutes of idling time for oil to circulate in the engine before driving away. Use light throttle until engine has fully warmed up.

Washing and waxing: New paint is soft for the first 30 to 60 days after spraying, and should cure up to three months before gaining full strength. Wash your new truck with clean water on a cool paint surface for the first 30 days. Use a soft cloth with a "nap" surface. If the truck is very dirty, use a mild car wash soap diluted in water and applied with a soft cloth. Do not wax your truck for 30 days, then use a cleaner-wax which is suitable for clear coated finishes.

In this case, logic prevails – if +3 is good then +4 is better!

Mopar/Cummins/Fleetguard Part Number Reference

Notes: This table Includes part number supercessions as of 8/30/01. Part numbers at the top are Mopar; middle are Cummins; bottom are Fleetguard. For lube filters the numbers on the left are paper/cellulose media design. The numbers to the right are Microglass or StrataPore design. Belt part numbers are Dayco. Hose part numbers are Dayco and Mopar.

MODEL YR	FUEL FILTER PART #	LUBE FILTER PART #	AIR FILTER PART #	BELT (Assumes A/C)	HOSES	THERMOSTAT
2001	05015581AA 3942470 FS19579	05016547AB 3937145 LF3959 LF3894	4728406 3097074 AF25541	5080810	52028715 52006482AB	05015090AA 3954194
2000	05015581AA 3942470 FS19579	05016547AB 3937145 LF3959 LF3894	4728406 3097074 AF25541	5080810	52028715 52006482AB	05015090AA 3954194
'99	04883963AB 3931476 FS19528	05016547AB 3937145 LF3959 LF3894	4728406 3097074 AF25541	5080810	52028715 52006482AB	05015090AA 3954194
'98 **24 valve engine**	04883963AB 3931476 FS19528	05016547AB 3937145 LF3959 LF3894	4728406 3097074 AF25541	5080810	52028715 52006482AB	05015090AA 3954194
'98 **12 valve engine**	04883963AB 3931476 FS19528	05016547AA 3932217 3865405 LF3349 LF3552	4728406 3097074 AF25541	5080810	71715 71716	05014568AA 3934373
'97	04883963AB 3931476 FS19528	05016547AA 3932217 3865405 LF3349 LF3552	4728406 3097074 AF25541	5080810	71715 71716	05014568AA 3934373
'96	4741689 3923108 FS1253	05016547AA 3932217 3865405 LF3349 LF3552	4728406 3097074 AF25541	5080810	71715 71716	05014568AA 3934373
'95	4741689 3923108 FS1253	05016547AA 3932217 3865405 LF3349 LF3552	4728406 3097074 AF25541	5080810	71715 71716	05014568AA 3934373
'94	4741689 3923108 FS1253	05016547AA 3932217 3865405 LF3349 LF3552	4728406 3097074 AF25541	5080810	71715 71716	05014568AA 3934373
'93	4429107 3834656 FS1232	05016547AA 3932217 3865405 LF3349 LF3552	4713953 3097073 AF25023	5080830	71594 71595	44420970 3802273
'92	4429107 3834656 FS1232	05016547AA 3932217 3865405 LF3349 LF3552	4428308 3097072 AF4555M	5080830	71594 71595	44420970 3802273
'91 (after 1/1/91)	4429107 3834656 FS1232	05016547AA 3932217 3865405 LF3349 LF3552	4428308 3097072 AF4555M	5080830	71594 71595	44420970 3802273
'91 (before 1/1/91)	4429107 3834656 FS1232	05016547AA 3932217 3865405 LF3349 LF3552	4428308 3097072 AF4555M	5080820	70540 71530	44420970 3802273
'90	4429107 3834656 FS1232	05016547AA 3932217 3865405 LF3349 LF3552	4428308 3097072 AF4555M	5080820	70540 71530	44420970 3802273
'89	4429107 3834656 FS1232	05016547AA 3932217 3865405 LF3349 LF3552	4428308 3097072 AF4555M	5080820	70540 71530	44420970 3802273