

## STR Transmissions

### Avoiding Scams and Rip-offs when Purchasing Transmission Repair!

Automatic transmission repairs are expensive; some can easily cost \$2000 and more. So it's more important than ever to find a shop that will provide quality repairs at a fair price. Here are a few ways you can avoid getting cheated when searching for a transmission repair center:

- 1. Get Recommendations** — Ask friends and family to recommend a shop where they were treated well.
- 2. Look for a Professional Appearance** — A clean, organized shop indicates a professional attitude. And that usually carries over into all phases of their business... including their repairs and job pricing.
- 3. Avoid Phone Estimates** — Today it's virtually impossible to give an accurate estimate over the phone. Any shop that will give you a price before they see the car is probably low-balling you. Expect the price to go up considerably before the job is finished.
- 4. Ask for a Detailed, Written Estimate** — After checking your car thoroughly, the repair center should have a fairly good idea of what's wrong with your car. They should be able to provide a written estimate that specifies what's wrong with your car, and what it'll cost to repair it.
- 5. Inquire about the company's memberships /affiliations** — Most reputable shops are members of an organization or association that provides consumer arbitration in the event of a dispute, such as the Better Business Bureau and AAA. ATRA provides this service to its members.

### Don't Buy Auto Repair over the Phone

A customer has an exhaust noise and calls a muffler shop and asks "How much to install a new muffler on my 1992 Ford?" The shop owner says \$100. Customer: "When can you do it?" The owner says "At 2 this afternoon." So at 2 o'clock the customer drives into the muffler shop. The customer says "Hi, I called about the muffler for the '92 Ford."

The owner says "Okay, we'll get it right in." The owner calls one of his mechanics: "Hey, Charlie, put in a new muffler on the '92 Ford next." Charlie gets the car in the air and the exhaust pipe has pulled out of the muffler (that's where all the noise was coming from).

Charlie disconnects the other end and puts a new muffler on. There may not be a thing wrong with the old one, but you bought a new one. The shop owner didn't sell you a new one, you bought a new one. You told him what you wanted and that was your mistake. Had that same customer driven into that shop and said, "I have an exhaust noise. Will you check it out and tell me how much it will cost to fix it?" A totally different transaction would have occurred. The owner would have said: "Hey, Charlie, get this '92 on the hoist and see what needs to be done to correct that exhaust noise." Charlie would have put it on the lift, checked it, gone to the shop owner and said, "The exhaust pipe is pulled out of the muffler. Owner says, "What will it take to fix it?" Charlie says "I can weld it or just put on a new clamp." See the difference? If the owner had said, "you needed a new muffler" that would have been fraud. But that owner will sell you anything you want to buy, and he cannot be accused of cheating you. Have you ever gone into an appliance store and said, "I want to buy a new TV" or refrigerator and have the salesman say, "What's wrong with your old one?" I never have.

Auto repair shops are no different. If you want to buy a transmission, they'll sell you one. If you want to buy a tune-up, they'll sell you one.

Put the "monkey" on the shop's back. Let him do the diagnosing and if you don't think he diagnosed it correctly, get a second opinion.

## Extend Transmission Life by Reducing Heat

The most common cause of automatic transmission failure is heat. You can get more miles out of your transmission by reducing the heat that builds up during normal operation. Here are a few things you can do to help reduce heat, and keep your transmission working longer:

- 1. Avoid Jackrabbit Starts** — Hard accelerations create a lot of friction and heat in the transmission. Take it easy on the gas, and your transmission will live longer.
- 2. Help the Shift** — Most of the friction and wear in the transmission takes place during the shifts. Get to know when your transmission shifts normally. Then, just before the shift, back off on the gas just a bit. That'll reduce the load on the clutches, and eliminate much of the friction during the shift.
- 3. Keep the Cooling System in Good Shape** — Your car's radiator also provides cooling for your transmission. And heat damage will take place in the transmission long before the engine appears to overheat. So regular cooling system service can help your transmission run cooler... and last longer.
- 4. Add a Transmission Cooler** — If you travel a lot in extremely high temperatures or carry a lot of weight in your car, an auxiliary transmission cooler is a great way to reduce heat and add years to your transmission's life.

## Checking the Trans Fluid Level

It's no exaggeration to say that automatic transmissions run on oil, more properly called automatic transmission fluid, or ATF.

Because of its dependence on ATF, low fluid level can have a disastrous effect on transmission operation — and even transmission life. That's why it's so important to keep an eye on the transmission fluid level.

Unfortunately, in recent years, many manufacturers have started to eliminate the transmission fluid dipstick. Called sealed units, these transmissions require a much more involved process to check fluid levels than in days gone by. The process often involves electronic testing devices, such as a computer scan tool. This puts checking the transmission fluid level beyond the capabilities of the average car owner.

If your car doesn't have a dipstick, you should have your local repair shop or dealership check the transmission fluid level at least a couple times a year, even if you don't notice a problem with the transmission operation. A good time to do this is while you're having the engine oil changed, in the spring and fall.

But if your car does have a transmission dipstick, you should check the transmission fluid level at least once or twice between oil changes. Your car's owners manual should provide a detailed procedure for checking the transmission fluid level in your car.

If you don't have an owner's manual, here's a basic procedure that'll work on just about any car with a transmission dipstick, except Honda's and most rear wheel drive Chrysler products. Chrysler's usually check in neutral and Honda's can be checked with the engine off, but again check your owners manual.

**WARNING:** Checking the transmission fluid level requires working under the hood of your car with the engine running. This can be very dangerous if you aren't sure what you're doing. Watch out for moving components, such as fans, fan belts, pulleys, etc. If you aren't comfortable with this procedure, always take your car to your local service station to have the transmission fluid checked.

1. Make sure your car is on level ground.
2. Start the engine.
3. Bring the engine and transmission to normal operating temperature. The easiest way to do this is to check the fluid level right after driving the car for a while.
4. Hold your foot on the brake, and work the shifter slowly through the gears. Give the transmission a second or two in each gear range.
5. Put the shifter all the way back into park.
6. Set the parking brake.
7. Carefully open the hood.
8. Find the transmission dipstick (your owner's manual should show you where to look for the transmission dipstick):

**Rear wheel drive vehicles** — the dipstick will usually be on the passenger's side of the engine compartment, near the back of the engine.

**Front wheel drive vehicles** — the dipstick will usually be on the driver's side of the vehicle, on either side of the transmission.

9. Remove the dipstick, and wipe it off with a clean rag or paper towel.
10. Slide the dipstick all the way back down into the transmission fill tube.
11. Pull the dipstick back out, and check the fluid level against the markings on the end of the dipstick, look at both sides, and believe the side with the lowest fluid level.
12. Add fluid as necessary, wait some before re-checking, allowing atf to run down the tube.

Always use the fluid recommended by the manufacturer. See the consumer information on fluid types to be sure you're using the right fluid for your car.

If the transmission requires more than a quart, or is using fluid regularly, take your car in to have it checked for leaks.

And if you're unsure of the procedure or where to find the transmission dipstick, check with your local ATRA member center: They'll be happy to show you where the dipstick is, and how to check the fluid level.

## Reading the Transmission Fluid

There's a lot you can learn about the condition of your transmission just by examining the fluid.

New transmission fluid is usually transparent, and relatively odorless. A few years ago, virtually every transmission fluid was red; technicians would aptly describe a transmission with exceptionally clean fluid as being "cherry."

Today, many manufacturers have begun to stray from the traditional red color. Transmission fluids may be green, yellow, some may even have a bluish tint. But in virtually every case, clean fluid will look clean, and smell clean. So checking the fluid's color and giving it a little sniff is a great way to determine whether your transmission is in good shape, or in need of service.

Here are the basic conditions you should be looking for:

**CLEAN, CLEAR FLUID, WITH VIRTUALLY NO ODOR** — the fluid's like new. Chances are the transmission's working fine. Use the vehicle mileage or time since it was last serviced to determine whether you should have the transmission serviced.

**SLIGHT BROWNISH TINT, WITH A LIGHTLY BURNT ODOR** — the fluid's beginning to burn, and is probably due for a service. If you didn't have the fluid exchanged completely the last time you had the transmission serviced, you may just be looking at the old oil that was left in the transmission. As long as the transmission seems to be working okay, consider a complete fluid exchange service in the not-too-distant future.

**BROWN COLOR, WITH A DISTINCTLY BURNT OR VARNISHED ODOR** — the fluid's burnt, and you may already be experiencing transmission operating problems. If the trans seems to be operating okay, you might still get away with a complete fluid exchange service and filter replacement. But there's little doubt that the transmission is beginning to wear, so the best you can expect from a service is to buy you some time. Eventually you'll be facing a transmission job.

**BLACK COLOR, WITH A STENCH THAT WILL MAKE YOUR TOES CURL** — the fluid's severely burnt, and the transmission probably is, too. You're probably experiencing a serious transmission operating failure. A service at this point will usually be a complete waste of money; the trans is going to need a rebuild. And there's the possibility of related problems, such as a clogged trans cooler or a cooling system problem. Make sure you have these systems checked at the same time, to avoid a second transmission failure.

Of course, fluid condition isn't the only thing technicians' check when examining a transmission's condition. They also look at operating condition, computer system codes, and any loose material in the pan, to name just a few. Oil condition is just one of a series of clues they use to diagnose transmission condition. If you're unsure of whether your transmission fluid indicates a problem, stop by your local ATRA member center: They'll be happy to check your transmission fluid, and suggest an appropriate course of action.

## **Regular Service Keeps Your Transmission on the Road**

Servicing your car's automatic transmission regularly can dramatically extend its life.

That's because the oil — or ATF — does more than just lubricate: It also helps drive the transmission. Damage to the fluid, such as oxidation and shear, will reduce its holding power. This allows the transmission to slip and overheat, and quickly cause it to fail.

Heat is the leading cause of transmission failure, atf that never exceeds 175\* can last 100,000 miles under normal driving conditions, but for every increase of 20\* atf life is cut in half.

Vehicles which are driven occasionally or for short distances are in many cases subjected to unusual wear and strain. For example, cars that are driven short distances, consistently never have the opportunity for the engine to warm up to the normal heat range. This can cause excessive engine wear.

Relatively, low mileage transmissions which are regularly used in city or stop and go conditions are subject to much higher wear than transmissions of the same mileage which are used under normal or primarily highway conditions. It is important to note that that it is not necessarily the mileage on a transmission which determines probable wear. Rather, it is the number of times the transmission has been run through its startup and shift cycles that determines probable wear.

Many other seemingly normal driving conditions can affect transmission life. Things like extreme climate conditions either cold or hot, mountainous, driving, motoring problems which are associated with snow or ice (and a host of others) can take their toll.

Under 'normal' driving conditions vehicle manufacturers recommend servicing your transmission as seldom as every 100,000 miles. As you can see from the limited examples above, very few motorist fit into the ideal or 'normal' driving condition category.

If you operate your vehicle under more extreme conditions, more frequent transmission servicing will be necessary to maximize transmission life. Servicing your transmission yearly seems to be an industry average. Under the most extreme conditions, even more often may be advisable and you may want to install an external transmission cooler for additional protection.

If you are uncertain about the frequency of transmission service for your vehicle and driving conditions, your local ATRA Member will be pleased to discuss your specific situation and make appropriate recommendations.