



# Tech Articles

## How Dust Hurts Your Fiero

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Several months ago the subject of dust came up and the effect it has pertaining to the Fieros interior, as well as, exterior. Because of the importance of this subject and the half-truths told to us by misleading advertisers, or well meaning, misinformed friends, the subject of dust, what it is and its affect upon us are as follows.

Dust is a by-product of erosion, combustion and decay in its natural state. Because of our desire to "want", in a modern industrial and civilized world, dust is produced faster then we can control it. Removal of wilderness areas, over population, over farming, over production of industry and so on, all of this contributes to....dust, dust and more dust.

Before I go on, I want to say first, dust has a very positive side, benefitting us and our environment. Yet, dust has a challenging side to its nature, to this I am addressing.

Dust comes in every color, shape and texture conceivable. Looking through a microscope, dust can look like flakes of snow, or slivers of glass. Depending on the power of the microscope a whole new world opens up, a world of life. Upon one particle of dust lives bacteria or fungi that can enhance life, or create a barren planet. Dust can have the ability to absorb water, based upon its composition, or to be void of any form of moisture.

In the jewelry industry as well as other industries, there is a gage used to indicate the hardness of stones and other materials called the "Mohs scale of hardness". On the Mohs scale, hardness ranges from one, the softest, to ten, the hardest.

### Mohs Scale

- 1 - Talc (Talcum Powder)
- 2 - Gypsum (sheet rock or dry wall)
- 2.5 - Fingernail, Fine Gold, Fine Silver, Lead
- 3 - Calcite (Copper)
- 4 - Fluorite (Sterling Silver)
- 5 - Apatite, Malachite
- 5.5 - Window Glass
- 6 - Orthoclase, Jade, Lapis Lazuli

6.5 - Knife Blade, File

7 - Quartz (Watch Crystals)

8 - Topaz, Emerald, Aquamarine

9 - Corundum (Ruby, Sapphire)

10 - Diamond (Gem and Industrial Grade)

Dust falls into every category of the Mohs scale of hardness, from the powder we put on our body after bathing to the dust of diamonds, used to cut concrete during road repair, or the polishing of precious stones. Dust of every type is used in industry, as well as being a by-product of industry.

Now that we have a thumbnail sketch of what dust is (it "is" everywhere), and what it is not (it "is not" going to leave us), let us discuss how dust can affect our Fiero.

Depending on where we reside and where we drive our Fiero, will have a major effect on the performance, safety and over-all appearance of the vehicles interior and exterior.

For example, in areas of the Southwest where the air is hot and dry and the terrain is high in gypsum, (White Sands, New Mexico), or silica (McAllen, Texas), dust in a strong wind has the ability to not only dull the luster of your paint finish, it can remove the paint altogether, turning windows opaque white in extreme cases. Dust will shorten your engines life span if air, oil and fuel filters arent changed more often then the recommended changing sequence. Dust will turn your interior into a disaster area, with dull gages, torn seat covers and creating high wear areas to the dash, steering wheel, gear shift lever, control buttons and levers.

The reason for this detrimental oddity is wind, heat and very low humidity. Picture traveling at speeds of 75 mph through the Southwest on a dusty road. Its windy and the area you are in has a high content of silica, gypsum, pumice and quartz with the dust dense enough to limit your visibility. Imagine the effect of such adverse conditions upon your Fiero and yourself. First, your driving too fast for conditions; second, the conditions you are driving under are equivalent to being in a sandblasting cabinet.

When driving at speeds of 75 mph, your engine is creating a large demand for air to be pulled through your air filter. Be assured the type of dust being drawn through your air filter and into your engine is shortening its life and years of motoring joy.

Remember silica is glass and fine silica dust can slice through most expensive air filters. So change your oil and all<D> filters often. Dust of this type can also scratch soft plastic and increase wear spots on the dash board, instrument switches, levers and steering wheels. Remember to clean your dash often with a fine quality cleaner recommended for dash and interior components.

How many Fiero owners have seats that look like the neighborhood pit bull used them for an attach toy? The reason for most worn seat covers is not because of wear, but due to dust. Every time you enter your car with dusty or dirty clothing, compounded with accumulation of the dust and grime on the seats, the fibers of your seat covers are being cut by the sharp edges of dust particles. Oil based grime attracts dust faster then you can ever imagine. Part of the process of diamond mining is to use a greased pan to find diamonds. Diamonds are

attracted to grease, just like dust is attracted to oil based grime. Vacuum often and use a good upholstery cleaner that will suspend the dust, dirt and dissolve the grime.

The so called "weather beaten finish" of a Fieros exterior is no more than the result of the abrasiveness from dust, to the top layer of your Fieros paint job. Imagine taking extra fine sand or pumice and rubbing it on your hood. The lack luster affect will be just about the same. True the sun can play a roll in fading, but it plays a very small roll at best. Auto finishes in the states of Washington and Oregon that have far fewer sunny days then the Southwest have produced auto finishes that were identical. Also, these were autos that were in the Eastern part of the state, away from the oceans salt spray. A good quality auto detergent will suspend the dust, dirt and dissolve the grime so it can be rinsed away. Washing should be done often in areas of high dust. A high quality wax will fill in the fine scratches and remove the old residue created by the dust. The swirl marks in the wax are the result of a dirty polishing cloth. Dust and dirt create the swirl marks, not the type of cloth or , a wax filled rag. Change your cloth frequently. Remember no wax or protective coating made on "this planet" can stop the effects created by dust. If any advertisement or salesperson boasts that it can, find out what planet theyre from, think twice before buying the product or get in your Fiero, turn it around in the opposite direction you came from and take off as fast as you can. Constant care is the rule and the only rule that will keep your Fiero looking great.

Dust under humid conditions has the ability to contain moisture, for longer periods of time then one can imagine. Dust, by its composition, is highly absorbent and extracts water vapor easily from the earths atmosphere.

A wide variety of viruses, bacteria and fungi find dust a means of transportation in order to travel from one area to another. Time and distance have no hold on dust and the organisms residing within these air born particles. After all, dust from the volcanic eruption of Mount St. Helens traveled around the world in the upper atmosphere. Dust particles removed from archeological sites in different parts of the world have found bacteria and fungi that have lay dormant for millions of years, only to be brought back into existence because of scientific study.

Once again, because of the complexities of dust and all its characteristics, it can make our Fiero a sculpted work of automotive artistry (when kept clean) or a faded hulk of rust and plastic (when not cared for and maintained properly).

Dust accelerates the process of rust in areas of the Fiero believed to be protected and sealed from water. If its not in a vacuum, its got air and air has dust, and dust contains moisture, and moisture contains salts and ferric oxide and when exposed to iron in an oxygen environment create.....rust.

Just remember to use a little common sense in the care and maintenance of your Fiero. Be aware of the environment your vehicle is in and adjust to its conditions.

In doing this, you can be assured many years and many miles of pure automotive pleasure.

Happy Motoring!!!