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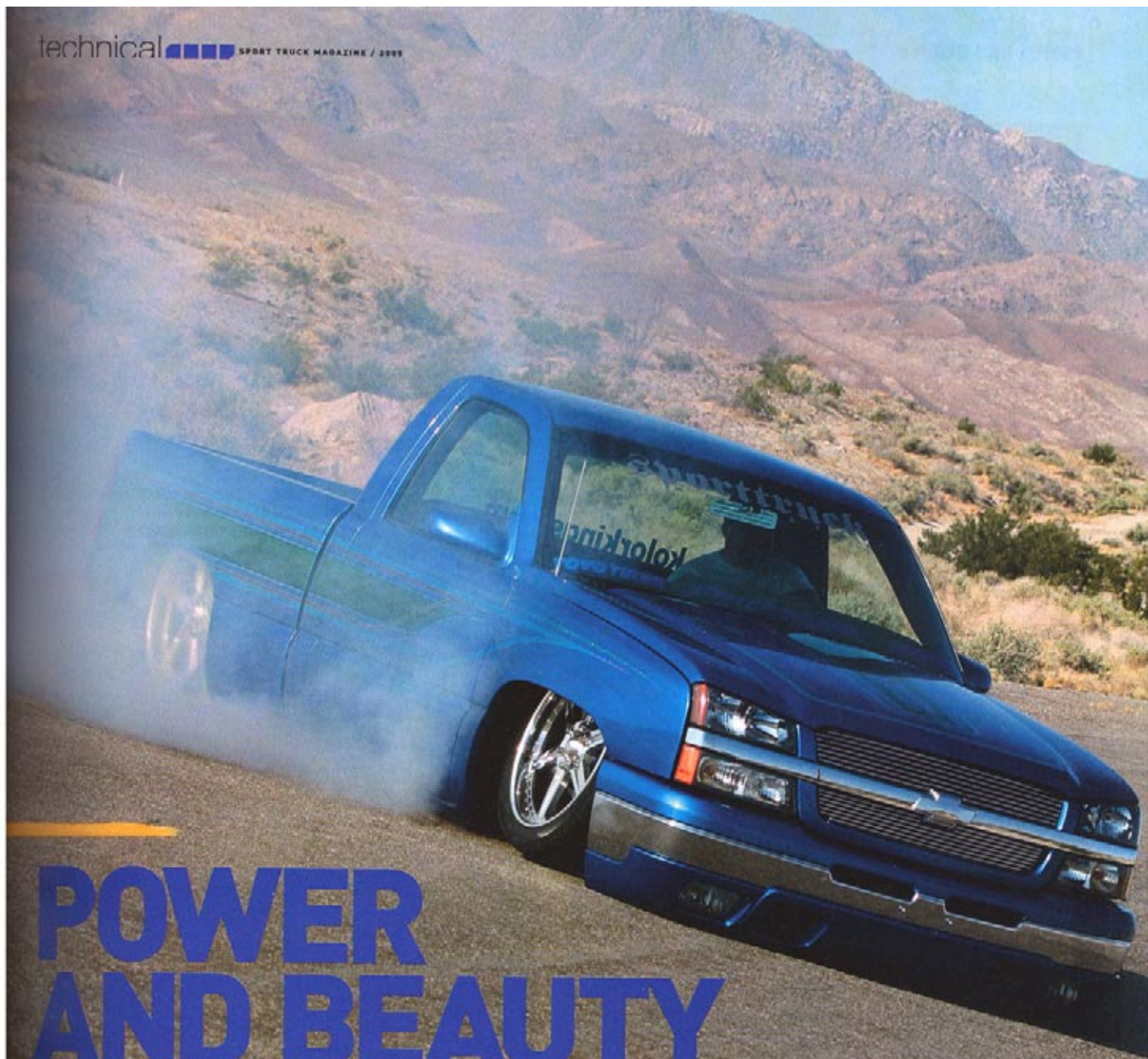
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POWER AND BEAUTY

STS PERFORMANCE AND JBA HELP AV-6 LOOK GOOD AND RUN STRONG

BY CALIN READ
PHOTOGRAPHY: CALIN HEAD

SOMETIMES IN THIS LITTLE WORLD WE BUILD TRUCKS IN, A COOL THING HAPPENS — YOU GET MORE THAN YOU EXPECTED. WE EXPECT AN EXHAUST TO ADD HORSEPOWER, BUT

do we expect it to look good, too? The answer is yes, but that's because we're spoiled. In this story, we threw a bunch of power parts at a V-6 to up the grunt, but what we got was something even better — a killer-looking engine compartment. We're talking about a six-banger, so it's not going to have ground-pounding power, but it is nice to be able to smoke the tires and impress da ladies. To free up that kind of power, we needed to use some tried-and-true parts. Thanks to STS Performance and JBA, we

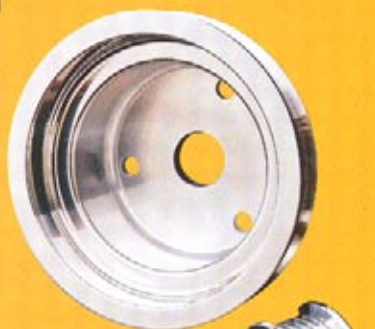
will transform the truck from a POS to a BMF to make the driver a VIP and improve his ETA so he won't be SOL.

JBA sent us a set of its smog-legal Cat4ward shorty headers for the Silverado along with all the hardware and gaskets needed to bolt them up. These headers feature all the benefits you'll find in any of JBA's pipes, such as stainless-steel mandrel-bent primary tubes, 3/8-inch single piece laser-cut flanges, and specific-length down tubes for better torque. We've done installs on JBA's headers in the past and saw an increase in horsepower and torque throughout the rpm range, and they do it without compromising the vehicle's emissions equipment. These headers will not void factory warranty, come CARB certi-

fied for 50-state smog legality, and have a limited lifetime warranty.

To complement the headers, we hooked up with Jay at STS Performance to provide an air intake, bored-out throttle body, and set of underdrive pulleys. The air intake tube STS makes features mandrel-bent tubing, K&N filter, and show-quality chrome plating. The pulleys are CNC-whittled from a solid chunk of billet aluminum with a smaller-than-stock od. The throttle body has been enlarged and the factory butterfly is replaced to allow more air in the motor with less restriction. The stock butterfly has a type of restrictor plate attached to it that really interrupts and restricts airflow (check out image 19 to see what we are talking about). ■

1



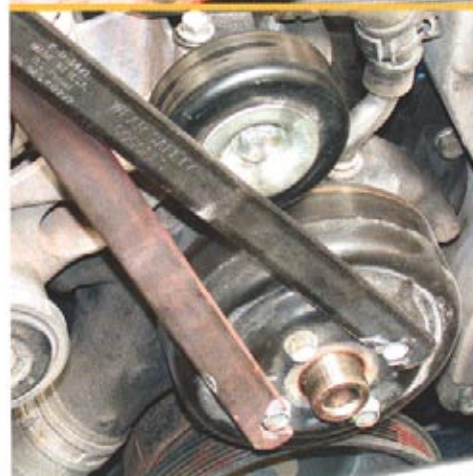
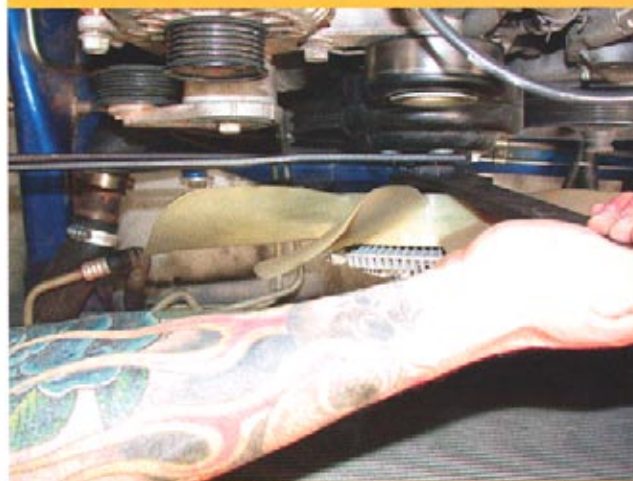
Here are all the parts that are going on our V-6. In theory, once all the pieces are installed, we should see more power and better fuel economy, thanks to the increased efficiency the motor will now have.

2

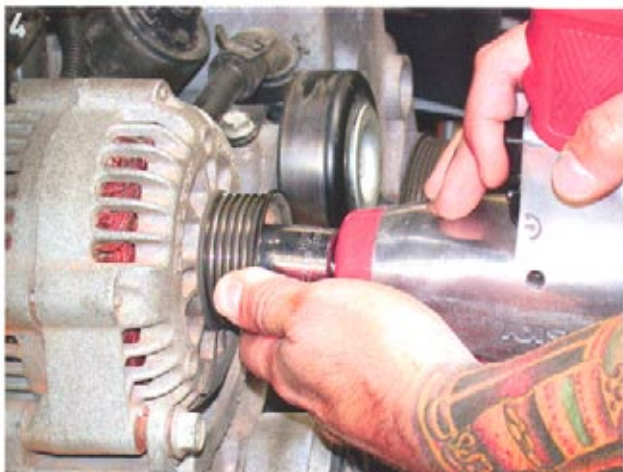


To install the pulleys, we first have to remove the serpentine belt. Loosening the tensioner assembly with a 3/8 ratchet allowed us to get the belt off. To gain better access to the crank pulley, we also removed the four 10mm bolts holding the fan shroud on.

3



You don't have to pull the fan for the install, but it really helps. The fan takes a special set of tools to remove it, thanks to the OEM mounting the fan directly on the water pump shaft. Jay from STS brought his setup to hold the bolts on the pulley while he loosened the fan.



An air impact is used to remove the nut on the alternator. The hammering effect the impact produces will usually get the nut off. If it just spins the alternator, then you must break it free with an open end and Allen wrench.



The alternator pulley is smaller than stock, which will increase the alternator's output. Typically a larger-than-stock one is used to compensate for the faster-turning accessories, but STS knows most of its customers are running either a large stereo system or airbag suspension, and the larger pulley was causing too much drain on the truck's electrical system.



No brain surgery here — just install the new unit.



Moving down to the crank, Jay removed the factory hardware and wiggled the pulley until it came off. As you can see, he was happy as a clam laying down on the job.



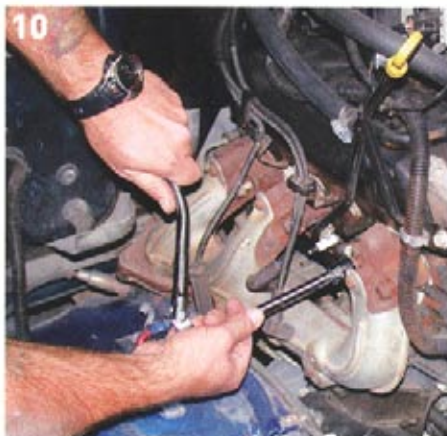
Here you can see the major difference in the od of the pulleys. The new one will slow down all the accessories to relieve some of the parasitic load on the engine and in turn give us some more ponies.



Now the pulley was tightened, again with an impact.



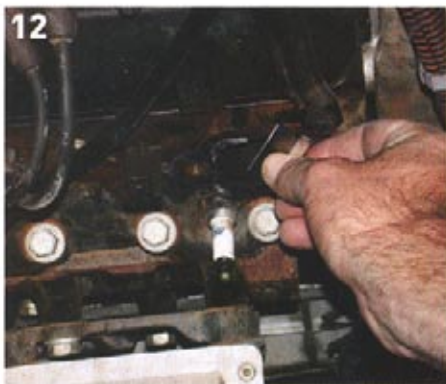
With that, the new Goodyear belt was snaked around everything and held on just like the factory belt.



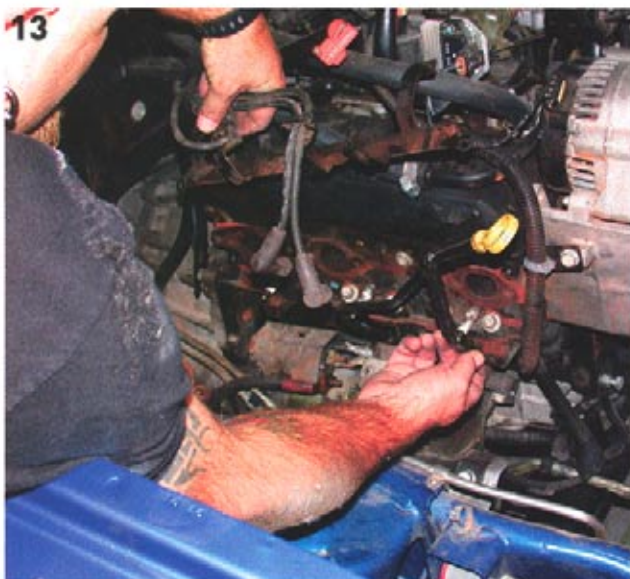
Most exhaust hardware will rust, making it hard to remove, so all the bolts were sprayed with a bit of penetrating oil. We gave it a few minutes to penetrate before we started unbolting the manifolds.



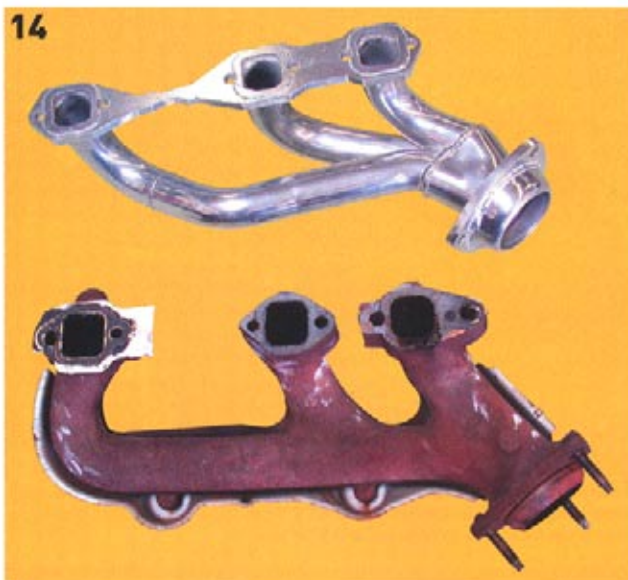
Once the bolts were off, the manifolds were removed.



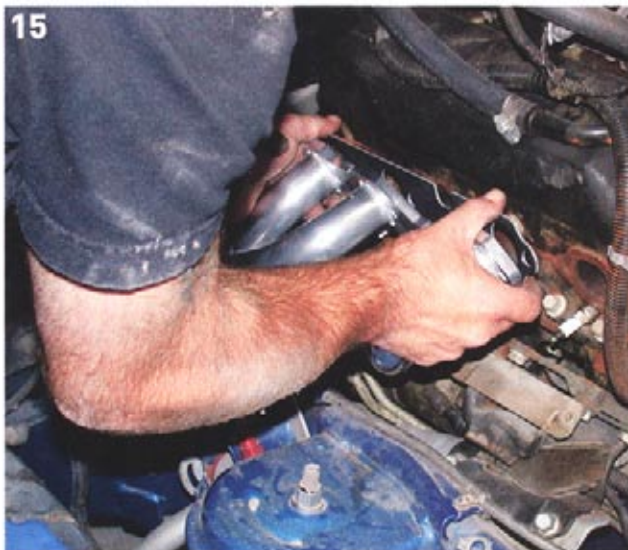
Before installing the new pipes, the head surface was cleaned of any old gasket or carbon.



Unbolt the spark plug wire looms and put them up out of the way. Do not skip this step. Otherwise, the spark plug looms will hold the head flange out, away from the head, preventing the headers from sealing. The dipstick tube also has to come out; it can be removed by gently wiggling the tube while pulling upward.



Here is a side by side of the stock manifold and the JBA header. JBA's headers keep the exhaust impulses from interacting with each other until they get to the collector, unlike the factory unit that has them interacting at different times after they leave the head. This cuts down on turbulence created and in turn improves flow and efficiency.



Now the shorty headers were slipped right in. JBA did such extensive R&D on these pipes that they had a factory fit; nothing hit or had to be massaged with a ball peen.



Once all the provided bolts were installed, we tightened them all up. Once everything was done, we came back and retightened these after the engine had heated up and cooled down a few times.



Moving on to the induction, the factory intake setup and the throttle body was removed. All the intake pieces were boxed up and stored, except the hat (this will be reused with the STS intake).



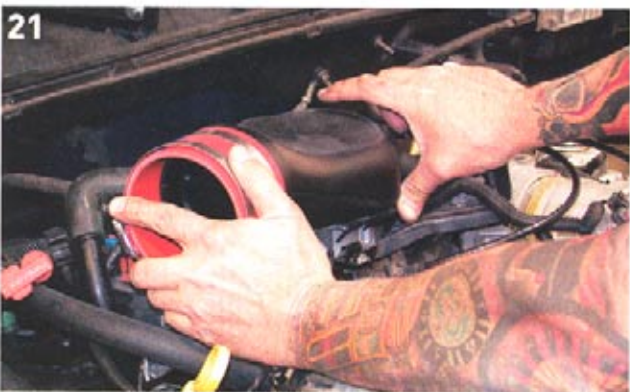
18 Here is the bored and smoothed STS throttle body. As you look down the hole you can see the clean path the air has.



19 Here is the factory butterfly and the restrictive scoop attached to the bottom. It doesn't take a rocket scientist to know why removing this will increase efficiency at wide-open throttle.



20 All the cable and lines go back on to finish this part of the install. One thing to make sure you have is wide-open throttle. Have someone get in the truck and step on the gas. If you can open it more with your hand, adjust it out.



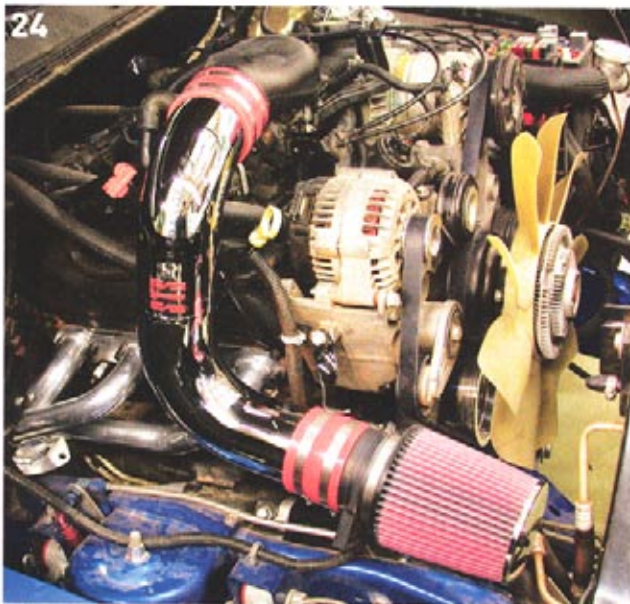
21 The hat pops back on to the throttle body and the new silicone coupler fit on that.



22 Now the tube assembly is installed. Not pictured is the mass airflow meter that was removed from the stock stuff and slipped between the filter and tube.



23 The weight of the filter is supported by a little bracket that bolts to the alternator bracket and slips under one of the hose clamps.



24 Here you go. As you can see, the engine compartment looks killer with all the new power parts and we also have more ponies to boot. Say hello to the shine and goodbye to the rear tires.

SOURCES:

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STS PERFORMANCE
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