Happy May, as in Spring MAY never friggin get here. Many of you have already been to your first car show. You probably got all giddy knowing the warm weather was coming only to have that smile torn off you face by that donkey kicker mother nature. I had the pleasure of hanging out with Jungle Pam at my first car show of the season. She is friends with my buddy who is a Drag Racing Hall of Famer and he introduced us. If you don't know who Jungle Pam is, Googly her. She and her nut case man Jim probably did more for drag racing than anybody. I say this with absolutely no qualification. But, when you see the pics, realize it was the 70s, you will probably agree that quite a few people got interested in the sport all of a sudden when she showed up in short shorts and stuff all jiggling around. Drag racing became an alternative to the National Geographic for high school boys all over 'Merica. If you don't know what I'm talking about, well you are not 'Merican and you might be an alien and I might punch you square in the forehead after quizzing you about high rise double pump carbontooters. By the way, I was told in college that forehead is pronounced " far-id" by my Speech Professor. This bothers me still. But, I have issues.

We had our first South Jersey Camaro Club Mod-a-palooza which consisted entirely of me and Mike and a set of springs and my dog staring at me from the house all side headed the way they do as I swore at Mike for having all these shiny bits on his car that did not make it go fast and got in my way. I honestly think Mike was just looking for cheap labor. He may not even be in the club. Come to think of it that might have been a Nissan, it did have a 6 cylinder. What, too low? Actually it was a nice car and Billy did a nice job on the paint. It took me a while to remember how to swap springs on a 5th gen, but we got through it in about 3 hours BSing and now his car is equipped with badassery. Perhaps I will discuss this later but in case you haven't noticed I write stream of conscious and don't really start with any plan.

I could start off talking about headlights and somehow end up writing about my Brittany Spear collection of hit records. Does Brittany Spear even have any hit records? Perhaps I should research my jokes. But, oh yeah, if you want to hang out and slap stuff on your cars let me know.

So, we have an announcement coming up from the Tech department. Our king of  the ¼ mile will be announced. You see I have exactly one time slip submitted to me. 1. Uno. If there is only one guy in a jungle, he is king of the jungle. If a tree falls on him I'm not sure if either he, or the tree make any sound. Even dead by fallen tree, he still gets to be king of the jungle. I will now rant about how you all need to man or woman up and get me some time slips. Or, I won't. The title is intended to move from member to member. It is intended to foster good-natured camaraderie and competition among our members. It is intended to be fun. It won't be with one time slip. So, step up or I will invite Mustang guys to play ☺

I ran into an issue this month I thought I would share. His name was Mike. Actually no, his name was 85 Jeep Cherokee. A fella showed up with this vehicle and asked if I could put it back together. He was in the middle of putting an engine in it and got in over his head. I inherited said Jeep, and boxes of

miscellaneous parts from whence they came I had no idea. So… fun, yay me! I explained to the gentleman that we needed to discuss: good, fast and cheap. He only got to pick 2. He was a bright lad and immediately got it. You can have good and fast but not cheap. You can good and cheap but not fast. You can have fast and cheap and not good. Savvy? He picked good and fast.

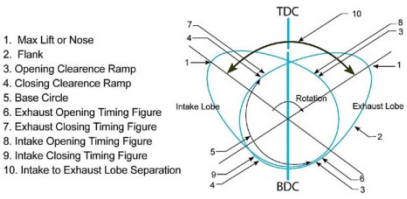
I must first quickly mention that I am not sure why anyone would fix up this vehicle. He has some other

really nice cars. I think perhaps he was de-flowered in this thing or something. So, from here on out it will be "Flower, the brown pansy of Manasquan". We will call it Flower for short. Flower has a 2.5 AMC 4 cyl motor. I've already had numerous "Jeep" people tell me it can't have a 2.5 AMC 4 cyl motor but it can because it does. They foam at the mouth and shake violently and babble something about Chrysler owned them in 85. Whatever, Flower has an AMC motor. Again, refer to my bewilderment about restoring such truckasaurus then add it that more bewilderment with the choice to replace the behemoth that is the 2.5 4 cyl Iron Lung 4 cyl. Or, Iron Duke, or Iron Maiden, or whatever the hell you people call this thing. Yes, crap I have a tech point. The cam shaft was replaced with a stock cam. Stock lifters, stock pushrods. Head and block were cleaned up but nothing major. Everything should go right back together right? No! My God would I be writing this if it did…FAIL!

If you change anything in the top end of a motor, you should always check the clearances. In this case the lifter pre-load was way, way off. Get your popcorn Sally, I'm gonna tell you how this works, how to check it, how to fix it and most of all why you care oh pilot of the sweet awe-inspiring chariot we call the Camaro.

Reach back in your nugget and remember we talked about the heads. I said there was an intake valve that sucked, the motor banged, than an exhaust valve that blowed. Those valves are timed and controlled by the camshaft. In most motors the cam is mechanically tied to the crankshaft. That means when the crank moves so does the cam. This is timing. You set the camshaft to be in perfect relation to the crank so that when the motor wants suck the intake valve opens, when the motor wants bang both valves are closed and when the motor wants blow the exhaust is open. The cam is no more than a

lumpy stick. Yes, get over it cowboy that fancy LS3 is controlled by a lumpy stick…still, cause it works. The lumps or lobes are cast to open the correct valve at the correct time via a lifter and push rod. Going to be tough, but picture in your melon an egg shaped lobe on the cam. As it turns the peak of the lobe pushes up on a lifter and push rod which in turn pushes up on a rocker arm, which much like me friggin rocks, and pushes down on your valve opening it up. How much its open is determined by the height of the lobe or "lift" as we say and how long it is open is determined by the shape of the peaky bit on the end of the egg. Fat peak, open longer, peaky peak open shorter. You gear heads should be thinking about all the neat things you can do by changing cam profiles… and guess what you are right! You can do all kinds of neat stuff

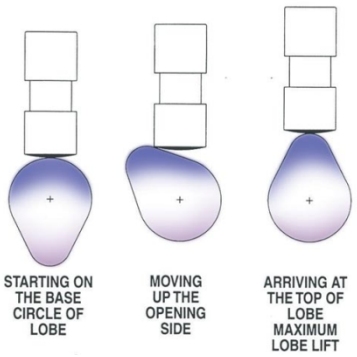


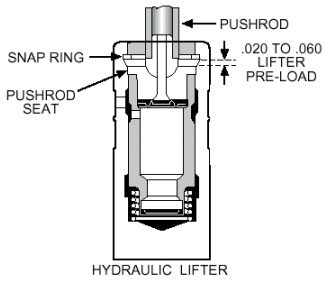
with cam changes, duration, overlap, lobe profile. Around 20-40 horse on an LS motor can be had with cam and tuning. But your results may vary. I could go on for a week about cam stuff but we can stop here. The 3 people that read this are probably bored by now.

So, with all that stuff there is a whole lot that can go south in a hurry. The lifters in this motor are hydraulic meaning that there is some cushion in the lifter regulated by oil pressure. When you hear that baboon in the bar talking about his solid cam street motor he is saying his lifter is a solid hunk o Def Leppard playing metal. It has no cushy and must be constantly fiddled with and maintained like your significant other. RJ says if you don't live above 7000 rpm use a hydraulic cam, but RJ is an idiot and don't listen to him. Now, stay with me. In this motor the rocker arm is also non-adjustable. It bolts to the pivot point and violla! That's it. The push rod should be around thirty thousandths in the cushy of the lifter when this happens.

But alas here comes China and 'Merican's incessant need to buy things for half the cost of the raw material it's made from and we get Flower in my shop with all this new stuff and none of it works. Many, many, many people assume because it is supposed to fit it just will and they bolt up and go. Turns out that with the rocker bolted down my lifter preload was too great. The pushrod was set too deep in the cushy of the lifter. There would have been no cushy left. What could cause this? If you shave the head and deck the block you are effectively reducing the distance between the cam lobe and the rocker tip. But this is usually not enough to cause this big a discrepancy. Pushrod length checked good, lifter length (plunger depth) checked good, head gasket thickness everything checked good. It must be the wrong cam, or the base circle on the cam is different.

To check preload you want to roll the motor over until the intake lifter/valve opens and closes then the piston comes to the top of that cylinder. I have a piece of thin stiff wire I stick in the spark plug hole to "feel" the piston coming up. Yeah I know super high tech. I also have a lighted camera that you can stick in the hole but that requires me to find it and it probably won't be there because somebody else borrowed it to light up their own hole. I rarely rely on the balancer marks because those outer rings can slip. In that position, valves sequenced closed, piston at the top dead center you should be on the back of the cam lobe (not the peaky lift part) for the intake valve of that cylinder. You should have the rocker torqued to spec and you should be thirty thousandths in the cushy of the lifter. The right way to check this is with a pushrod length tool. It's basically an adjustable push rod. Shorten the rod, stick in the motor in this configuration and then lengthen it until it just touches the lifter and rocker without compressing the cushy. Carefully remove it and measure. Add thirty thousandths and that is the correct length push rod you need to run. I'm so not going to tell you thirty thousandths is about ½ of a turn on the rocker nut because that is not tech. But there I just told you that. But get the $9 tool. I don't have a 10" caliper nor the brains to read it so I just pop on down to my machine shop and have Dave read it and find me the correct rod. D&F Performance is pretty smart like that. Another method to measure





preload on a non-adjustable valve train is to get the valve on the base circle of the cam as described. With the rocker torqued in place, put a dial indicator on the end of the rocker. Then loosen it and see how much you come "out" of the lifter. I've seen folks use a flat edge and scribe a mark on the push rod with a tight rocker, then loosen and scribe another mark and measure the distance. I like my method better. Lots of ways to skin the cat, just skin it. If for some reason you can't find the correct length pushrod, you can shim the rocker to get the height right. I don't like adding small parts to a motor, but if you have to, you have to. Luckily Flower had a rod available that would be close enough to the window I needed. If you think about it, too long a rod would bottom out the cushy and possibly open the valve when it wasn't supposed to be. Too short and it would be slapping around in there and not opening the valve up at the right time or long enough or big enough. Both of those scenarios not only rob power, but could make the motor go boom-boom. Flower really wants to remove itself from my shop so setting it up for no boom-boom is important.

Why do you care? Cause I told you to. Well, that and the LS1,2,3,6 has non-adjustable rockers. This process is exactly the same for our cars. I think I can fairly say that if you buy a new cam from an established shop and you know your motor is untouched and stock and they say it will work, it will. But I grenaded Ford 4.6 motor once that I did not check because I was told up and down by this huge, huge cam company that it would work. Turns out 4.6s are made in 2 different plants and the Romeo plant used a part that had a different cast and viola again! Disaster. Shop stood up and bought me new parts, which was cool, but they didn't have to. I'm supposed to check. And, so are you. If you say I just pay a shop I will disown you. You have a Camaro, you should install your own camshafts, know how to check them and have a mullet. For more info get on the interweb or give me a shout. There are tons of good articles out there by people way smarter than me.