RECESSION-PROOF PERFORMANCE

$IMPLE WAYS TO IMPROVE A PONY

STORY RICARDO TOPETE

WITH THE CURRENT ECONOMY, EVERYONE IS LOOKING TO STRETCH A DOLLA MORE. TIGHTENING YOUR BUDGET DOESN'T MEAN SACRIFICING PERFORMAN

We have found some "bang-for-the-buck" upgrades that deliver big power for minimal cash. Some of these upgrades are even free! These are true "bolt-ons" that the average guy/gal can do in their driveway.

Mustang fanatic Eddie Garcia was kind enough to lend us his 100-percent stock 1991 Mustang GT for tweaking. It was factory except for a set of 17-in rims and a high-flow reusable ai

We dyno tested Eddie's 'Stan High Performance on their Dync dyno. A Dyno-Jet measure horsepower (rwhp) and tor the wheel. In other words, i power and torque being pu the ground.

The Mustang was given a blasts to establish a baseli rwhp at 4,300 rpm and 255 r rpm. Both horsepower and to out at a very low rpm, a sure 5.0 engine is inefficient in sto

First, we advanced the ignit This requires a timing light, wh obtained at most auto parts or Advancing the ignition timing ig air/fuel mixture in the cylinders for a more complete burn of the which adds power. Stock Musta

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1 This is a rare sight: a 100 percent stock 5.0 Mustang!

2 In stock trim, the Mustang puts down 185 rwhp on the dyno.

3 A quick ignition timing bump to 13 degrees BTDC yielded six hp and three lbs-ft of torque to the tires.

4 The stock air box is removed to gain access to the stock air silencer, which we dropped like a bad habit.

with the timing at 10 degrees before top-dead center (BTDC). We bumped it up to 13 degrees BTDC and gave it another pass on the dyno. The results were 191 rwhp at 4,300 rpm and 258 rwtq at 3500 rpm! We gained six peak rwhp and three peak rwtq with this free modification.

The 91 octane fuel (or higher) must be used to prevent pinging with advanced timing. For those living in states where higher octane is available, you can advance the timing to around 15 degrees BTDC and see even more power.

HORSEPOWER: 191 RWHP
TORQUE: 258 RWTQ
PEAK POWER GAINS: 6 RWHP & 3 RWTQ
COST: $0 ... FREE!
DOLLARS to HORSEPOWER RATIO: N/A

We tried another freebie Mustang trick by removing the air silencer. All '86-'93 5.0s will have an air silencer inside the passenger fenderwell that co the air filter box. The sole pur silencer was to minimize engi (hence the name). In a few mi were able to ditch the air sile noticeable increase in engine

Upon inspection of the silenc to see how it restricts the incom With the silencer gone, the mot breathe easier. More dyno testir and we were rewarded with 195

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5 No wonder eliminating this piece picked up four extra rwhp. It's surprising any air can get past this!

6 MAC's pulley kit replaces the crank, water pump and alternator pulleys.

7 Notice the significant size di the pulleys. From top to bottom water pump and crank pulleys.

8 With the MAC beauties insta stock belt can be routed into pl

262 rwtq, with peak gains of four rwhp and four rwtq, all for free. The largest realized gains were five rwhp at 5,000 rpm and six rwtq at 3,500 rpm. As you can see, the Mustang likes the free stuff.

HORSEPOWER: 195 RWHP
TORQUE: 262 RWTQ
PEAK POWER GAINS: 4 RWHP & 4 RWTQ
COST: $0 ... FREE!
DOLLARS to HORSEPOWER RATIO: N/A

We had come to the end with the free tricks. It was time to start stimulating the economy and spend some money. First up: MAC Products' billet aluminum underdrive power pulleys are ultra-light weight and powdercoated red. If red is not your color, MAC offers the pulleys in several different colors.

MAC's pulleys allow the accessories to be underdriven to reduce parasitic power losses. This makes the engine more efficient, as it doesn't exert as much energ rotating all the engine accessorie saved energy/power then gets tr the rear wheels, which is where v

Installing the pulleys can be d basic tools. GTR had the pulleys over in about 45 minutes. When rollers stopped, the 5.0 settled a and 269 rwtq. We realized a pea eight rwhp and seven rwtq! Ever impressive were the largest gair

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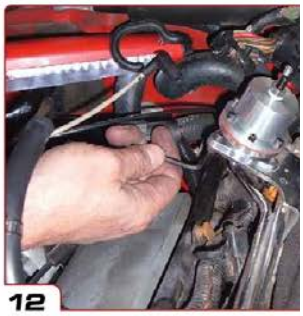
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9 Kirban's billet aluminum fuel pressure regulator pleasantly surprised us with its gains.

10 With the upper intake manifold removed, you can gain access to the retaining bolts on the stock regulator.

11 Eddie Garcia carefully removes the stock regulator. Notice that he has covered the intake manifold to prevent debris from falling in.

12 The Kirban unit is now installed on the fuel rail. This piece works as well as it looks, as it gave six hp and eight lbs-ft of torque to the tires.

rwhp and 12 rwtq, both at 5,000 rpm. The Mustang is now more eager to pull higher rpm due to its newfound efficiency.

The MAC pulleys yielded the largest gains — regardless of price. With GTR's retail price of $84.99 at time of testing, the pulleys should be at the top of anyone's list that seeks sizeable power gains with minimal investment.

HORSEPOWER: 203 RWHP
TORQUE: 269 RWTQ
PEAK POWER GAINS: 9 RWHP & 7 RWTQ
COST: $84.99 (at time of testing)
DOLLARS to HORSEPOWER RATIO: $9.44 per Rear Wheel Horsepower

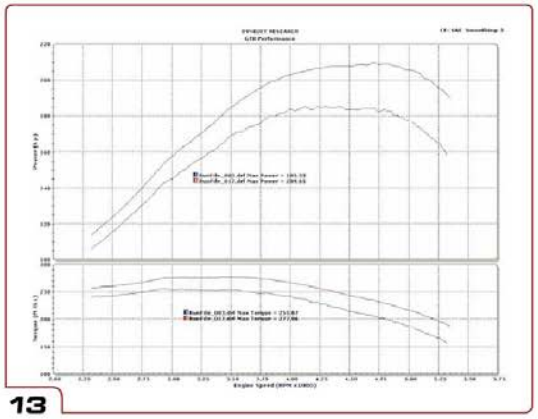
Another proven power maker is Kirban's adjustable fuel pressure regulator. Naturally aspirated engines make maximum power with an air/fuel ratio in the 12.8 to 13.2 range. All of the dyno runs thus far were showing air/fuel ratios well below that, indicating that we were running rich. The stock non-adjustable regulator
to run rich at wide-open throttle
regulator would allow us to adju
pressure to find the optimal A/F

Installation of the Kirban regu
done in a couple of hours. To ac
regulator, the upper intake mani
removed, which isn't as bad as
Team GTR managed to have it c
an hour and a half. Although no
are needed for this job, in order

	RWHP	RWTQ	HP GAIN	TQ GAIN	PRICE
STOCK	185	255	N/A	N/A	N/A
13 DEGREES TIMING	191	258	6	3	FREE $0
AIR SILENCER	195	262	4	4	FREE $0
PULLEYS	203	269	8	7	$85
ADJ. FUEL REGULATOR	210	277	7	8	$80
TOTAL			25	22	$165

the fuel pressure, a fuel pressure gauge is required. These can be purchased at most auto parts or tool stores for about $30.

In order to optimize the fuel pressure, testing and tuning will be required. The best solution is to put the car on a dyno to verify the results. A more primitive approach is visiting your local dragstrip and making adjustments and documenting your car's performance.



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13 The dyno doesn't lie. Here we have the before and after results of our efforts.

Once complete, we let the Mustang rip on the dyno and trimmed the fuel pressure down until the perfect air/fuel ratio was found. Ultimately, we lowered the fuel pressure from a stock 32 psi to 25 psi (both at idle). Power had climbed to 210 rwhp and 277 rwtq. We saw peak gains of seven rwhp and eight rwtq, simply by correcting the fuel pressure and maximizing the air/fuel ratio.

Kirban's regulator proved to be the shocker of the bunch as it produced the second best Dollar-to-Horsepower ratio. GTR sells the Kirban regulator for $79.99 (at time of testing), making it a sound investment for any Pony.

HORSEPOWER: 210 RWHP
TORQUE: 277 RWTQ
PEAK POWER GAINS: 7 RWHP & 8 RWTQ
COST: $79.99 (at time of testing)
DOLLARS TO HORSEPOWER RATIO: $13.33 per Rear Wheel Horsepower

By the end of the day, we had quick, effective and affordable r at the 5.0, to which it responded All told, we found an extra 25 rw rwtq while dishing out $165. Tha $6.60 per rear wheel horsepowe as cheap as you will ever find!

If you have a stock 5.0 Mus are looking for ideas on how t more power, look no further. T some of the best bolt-ons ava regardless of price. AE

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