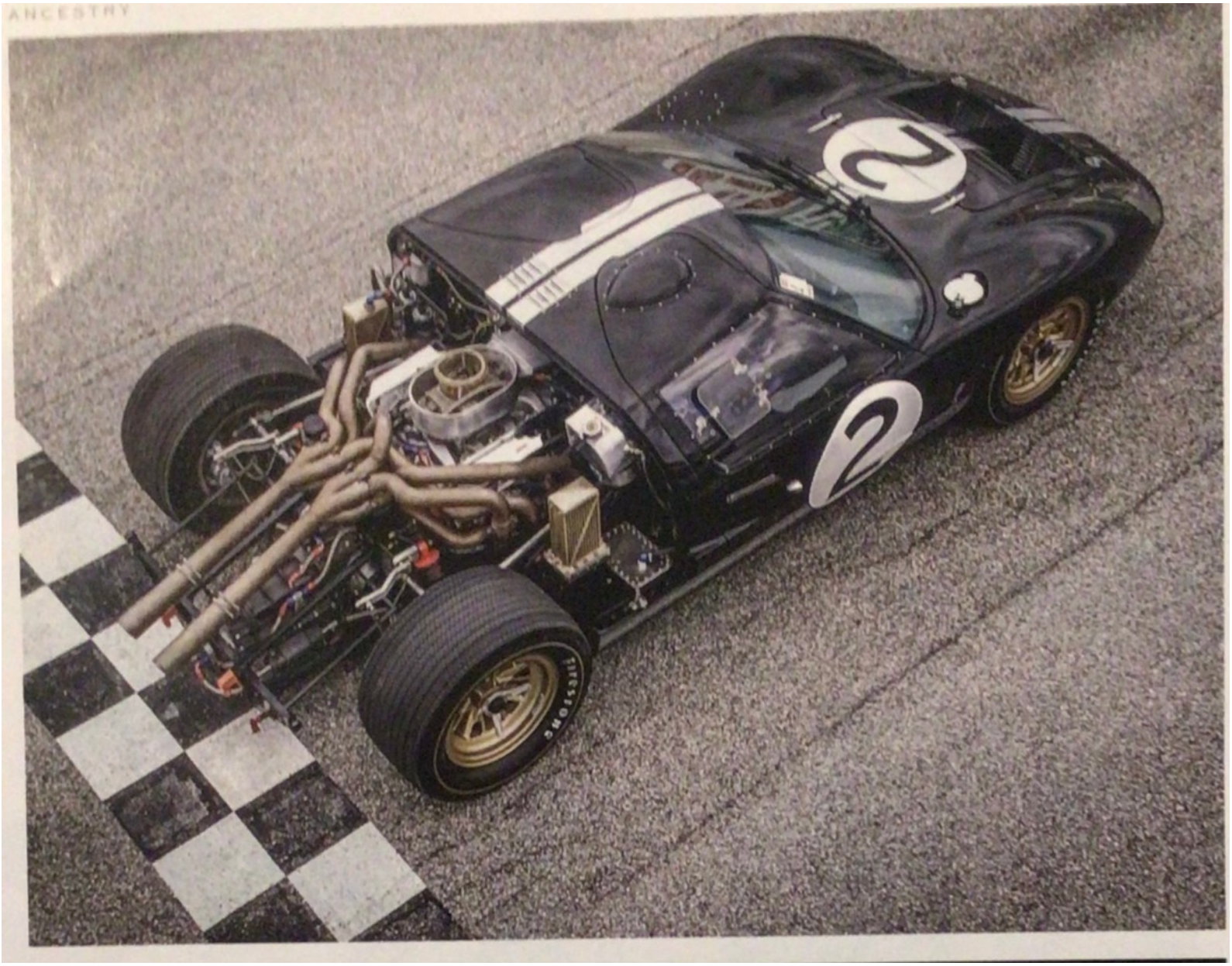
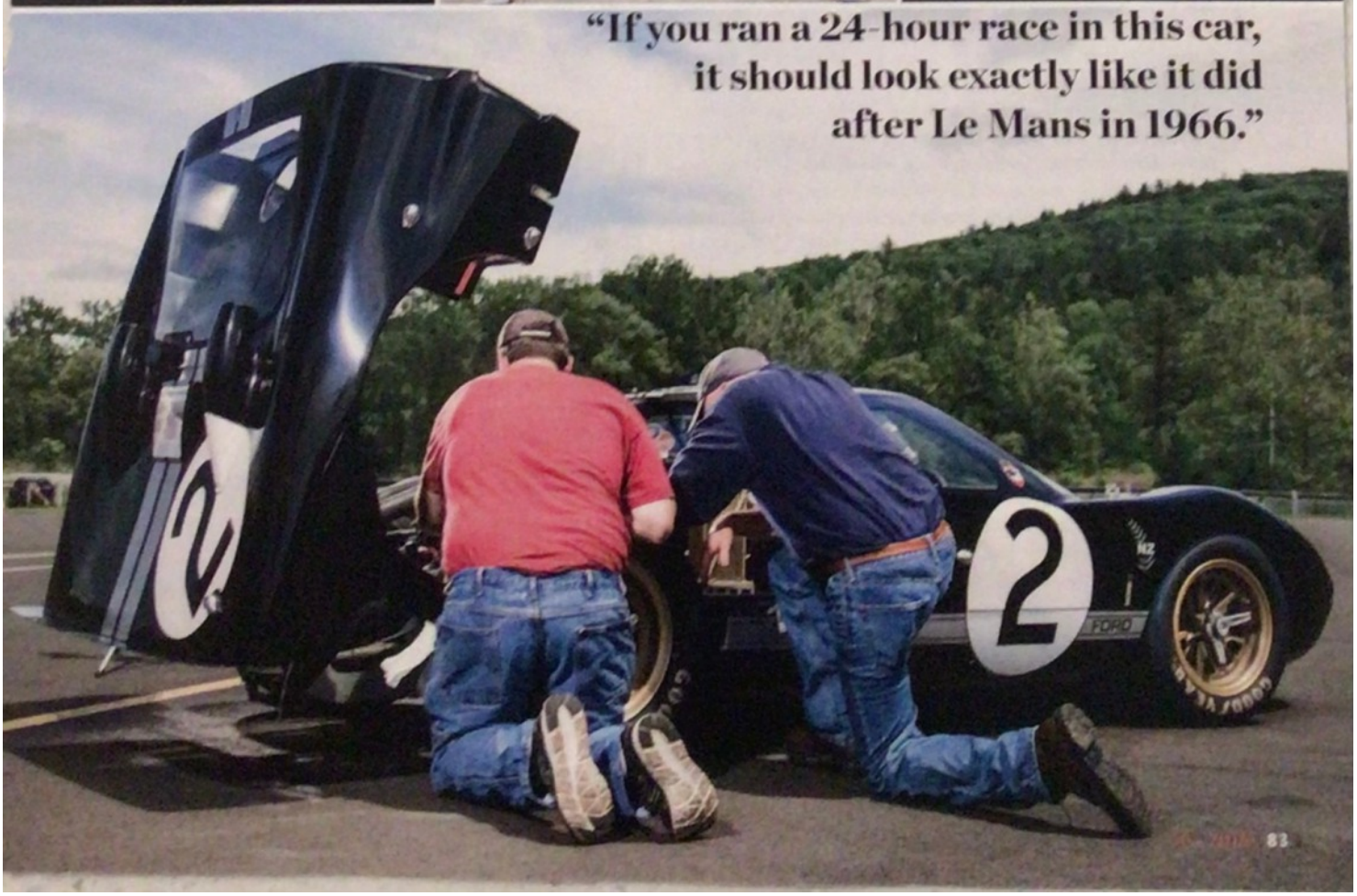
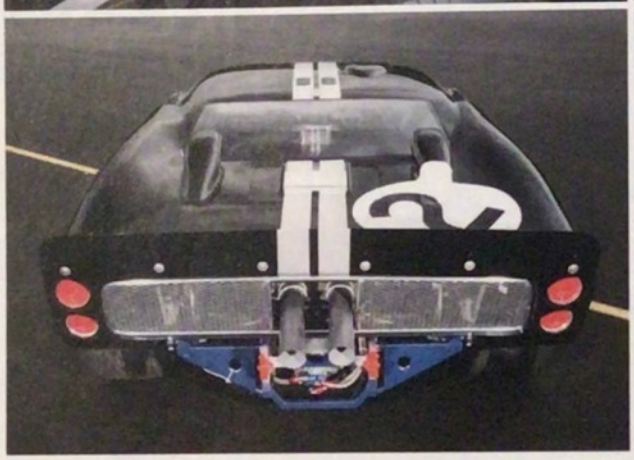
Images, History and Notes



Mark Allin of Rare Drive, kneeling in the blue shirt while the car was being shaken down at Lime Rock Park, led the soup-to-nuts restoration of 1046, which consumed 3,000 hours over 18 months.

"If you ran a 24-hour race in this car, it should look exactly like it did after Le Mans in 1966."






260
300
220
OIL
180
TEMP
140
335
ENG
OFF
OFF
FUEL
IGN
TURN


2
FORD

Motorsport was conceived by Editor-in-Chief D. Randy Riggs as a way to pay tribute to street cars that could have been race cars back in the day: i.e. Jaguar XKs, Triumphs, Porsches, Sunbeam Tigers, etc. In an unusual twist, this "Road Stir" feature is about a race car that could also be a street car. And is!

Dozens of books, and a soon-to-be-released movie, document why the Ford GT was developed, and why winning Le Mans became such a priority for Ford Motor Company in the 1960s (and Henry Ford II as well), but following is a Cliff's Notes history as a refresher. Ford had attempted to purchase a share of Ferrari from its founder Enzo Ferrari in order to add exotic cars and racing to the FoMoCo brand. But at the last minute, Enzo killed the deal, afraid of what life would be like after the merger, and how his company would be swallowed up in corporate bureaucracy. Feeling snubbed, Henry Ford II told his staff to "Go out and beat him." Ford would campaign a team at the 1964 Le Mans race.

We Are The Champions

Ford contracted with Lola founder Eric Broadley to update his mid-engine Mk 6, which morphed into the GT40 Mk I. Brit John Wyer, who led the Aston Martin factory team to victory at Le Mans with Carroll Shelby as driver in 1959, was brought in to manage the team. Three cars were entered, all powered by a Fairlane-derived 256cid engine that had been developed for Indianapolis.

In the race, the Mk Is were initially competitive and able to turn similar lap times to the Ferraris, but one by one, mechanical issues caused all three to DNF.

Despite disappointment, Ford's management saw promise and decided to return to Le Mans in 1965. Additionally, Shelby was brought in to field the effort.

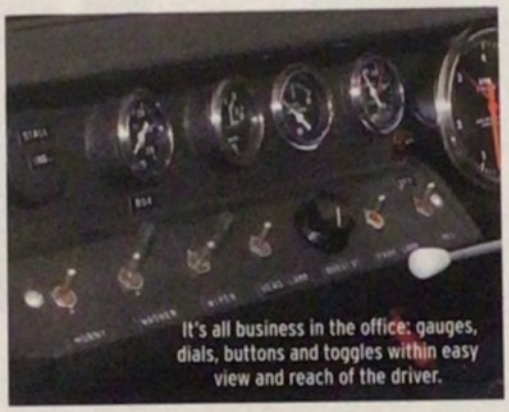
Six cars were entered, four with 325cid variations of the 289 small-block, and two with big blocks. Using the time-honored hot rodder's adage, "If lots of horsepower is good, more is better," the production-based 427, developed for NASCAR and available in the Galaxie, was chosen. Thus the Mk II was birthed.

Ford engineers concluded the big engines would be less stressed than Ferrari's smaller displacement 12-cylinder engines. Built to conservative standards by Ford's Engine and Foundry division, the 427 produced about 485hp and 475 lb/ft of torque.

Despite better planning, and a variety of engine sizes, Le Mans in 1965 again did not go well for Ford. Even though Phil Hill put one of the 427-powered cars on the pole,

THE HENRY FORD

Chris Amon heads 1046 out of Mulsanne corner en route to winning Le Mans in 1966.



It's all business in the office: gauges, dials, buttons and toggles within easy view and reach of the driver.

Having been crack-checked and refinished, 1046 still rolls with the original magnesium wheels it raced on.

The 427 with humble Galaxie origins. Engines were built by Ford's E & F (Engine and Foundry) division and distributed from a pool to teams at random.

and small blocks qualified 3rd and 5th, head gasket and tranny gremlins took out all six GT40s before the seven-hour mark.

Ford would give Le Mans one more try in 1966, and all the stops were pulled out. Massive testing was performed, including continuous 48-hour runs at Ford's Kingman, Arizona, test track. Ford Racing director Jacques Passino once told me, "We decided if the GTs could endure 48 hours in a testing environment, they should last for 24 hours of racing."

Ford also spread their Le Mans program over three racing organizations: Shelby American in California, Holman-Moody in North Carolina and Alan Mann in England.

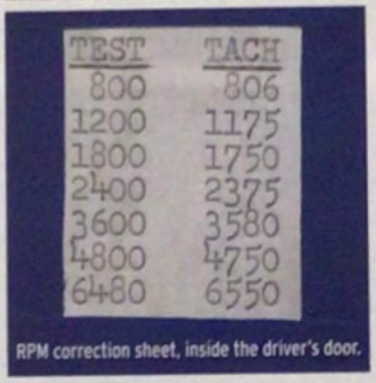
This is where our subject car, GTP s/n 1046, comes into the picture. The bare chassis was completed on January 17, 1966, and turned over to Shelby for preparation. A Kar Kraft 4-speed transaxle was installed with Top Loader gearing. It was painted black with silver stripes.

Ford distributed finished engines at random to the three teams through an engine pool. Our subject car competed at Le Mans with engine #AX-316-1-41. Engines were equipped with a conservative cam grind and a four-barrel, 780cfm Holley carburetor, potent enough to push the car through the air at 205mph at 6200rpm.

The car, which was only 40.5 inches tall, weighed in at 2,832 lbs., including a 150-lb. driver.

To cut to the chase, the Fords dominated the 1966 Le Mans race, finishing in a dramatic, if controversial, 1-2-3 finish.

As per the original, restorer Mark Allin sourced the correct Harrison engine oil cooler from a Cessna airplane.



TEST	TACH
800	806
1200	1175
1800	1750
2400	2375
3600	3580
4800	4750
6480	6550

RPM correction sheet, inside the driver's door.

42 gallons of fuel fill tanks in each of the car's 10-inch wide rocker panels, now equipped with fuel cells.

A Winner Among Winners

The black car you see on these pages is the car that crossed the finish line first with New Zealand drivers McLaren and Amon, who drove with nearly surgical precision, completing 3,009.3 miles and approximately 9,000 gear changes. Ken Miles and Denny Hulme, driving a blue Shelby team (No. 1) GT40 finished 2nd, and a gold (No. 5) Holman-Moody-entered GT40, driven by Ronnie Bucknum and Dick Hutcherson, finished 3rd.

In an effort to stage a 1-2-3 photo finish, Ford has been criticized for denying chief development driver Ken Miles the victory he had worked on for so long. But because the McLaren/Amon car (s/n 1046) had started two positions further back on the grid than Miles/Hulme (s/n 1015), they had driven the longer distance, and were therefore declared the winners.

McLaren and Amon were crowned champions and Ford accomplished their plan to just "Go out and beat" Enzo Ferrari.

Ford immediately began planning for a repeat in 1967, to prove that their victory was no fluke. Development of the more advanced Mk IV began in earnest.

No Respect

The future of chassis s/n 1046 was far from glorious. After Le Mans victory ceremonies, the car became the main test mule in the further development of the Mk II. It was shipped to Ford's Kingman, Arizona, test track in late October for post-race analysis. In November it participated in a series of side-by-side comparison tests at Riverside Raceway against the new J-car, which was to be the replacement for the Mk II. In those tests, cars were equipped with both automatic and manual gearboxes and numerous brake setups, and driven by Mario Andretti, Lloyd Ruby, McLaren and Hulme.

After the Riverside tests s/n 1046 was shipped to Charlotte, N.C., where it was stored in a huge airplane hangar adjacent to Holman-Moody's main complex, parked alongside numerous other retired race cars and prototypes. After the Le Mans win, its engine, AX-316-1-41, was apparently given to parts supplier Federal Mogul, where it was dismantled and mounted on a display board. The company used it at trade exhibits to show the lack of significant component wear despite 24 hours of hard racing.

The car was eventually painted silver and entered by Holman-Moody in the 1967 Daytona Continental, but not before modifications deemed necessary after Riverside testing. All the Mk IIs were now fitted with two four-barrel Holley carburetors instead of a single unit, and rollcages and fire suppression systems were installed.

Hulme and Ruby started 9th but fell victim to faulty transmission components, which was to befall all big-block Mk IIs in the race. They finished 39th, completing just 299 of 666 laps.

Chassis #1046 was again relegated to storage at Holman-Moody, its future undecided. Research indicates the car was used in a traveling promotion for Hathaway Shirts until May, 1968, then it was back to Holman-Moody where it languished in the hangar and stripped for parts.

Certainly a sad fate for such an accomplished automobile.

1/12 Trumpeter vs Meng engine size?

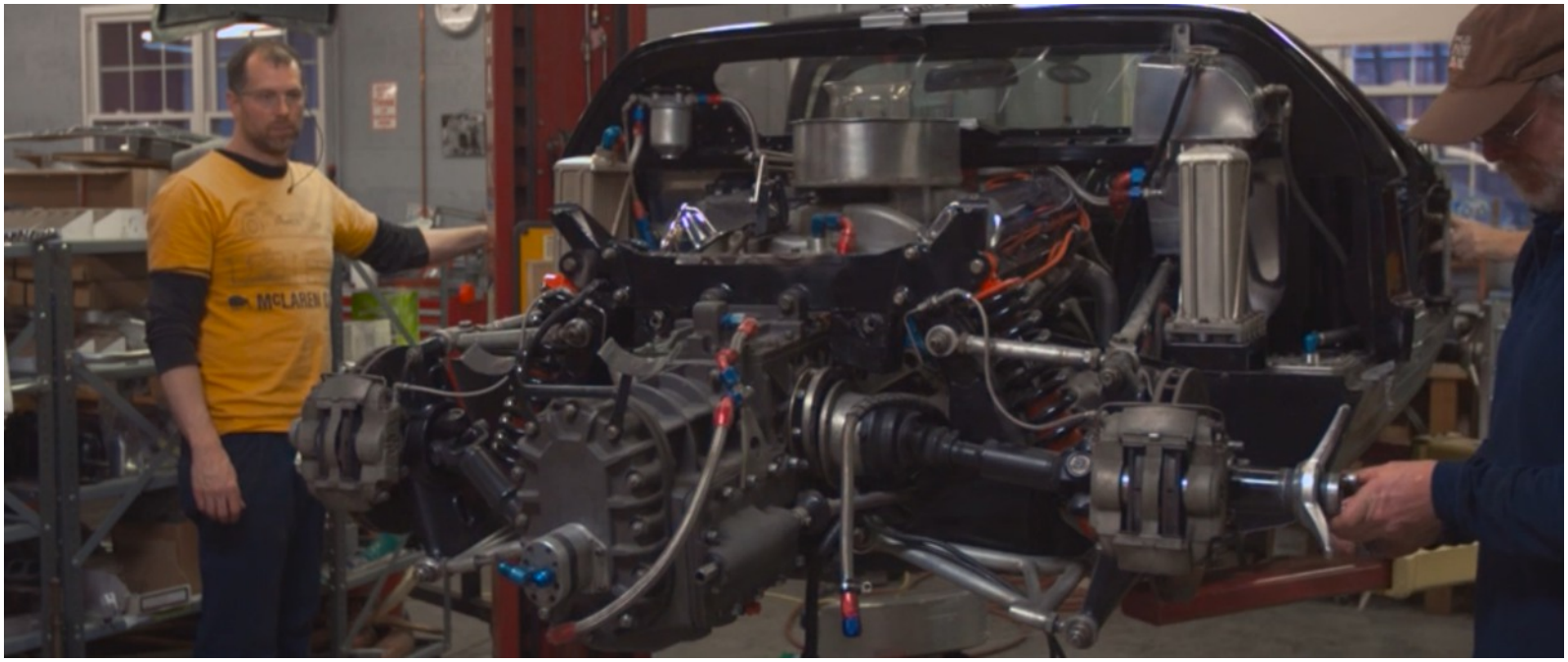
Automotive Cars trumpeter, meng

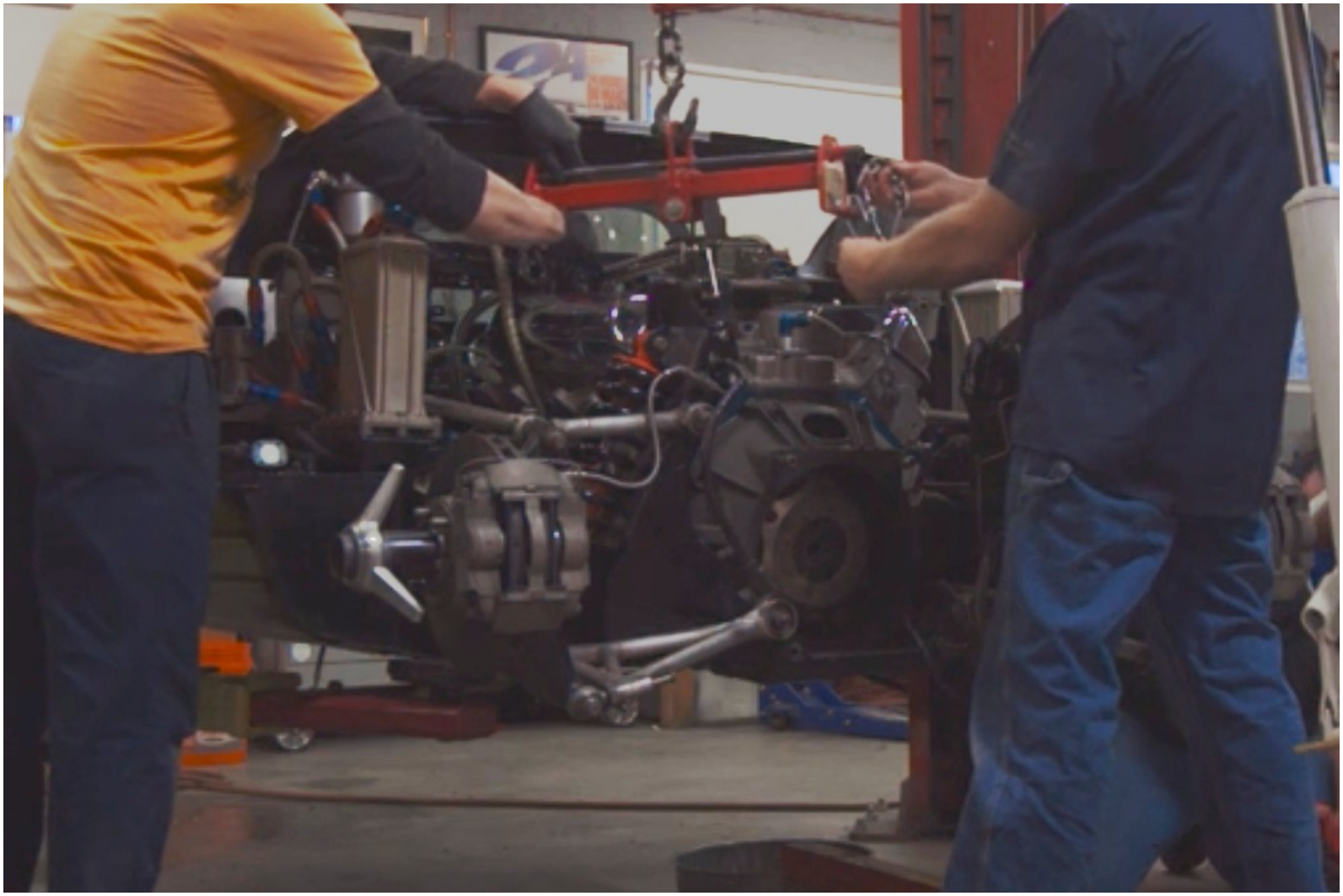
M

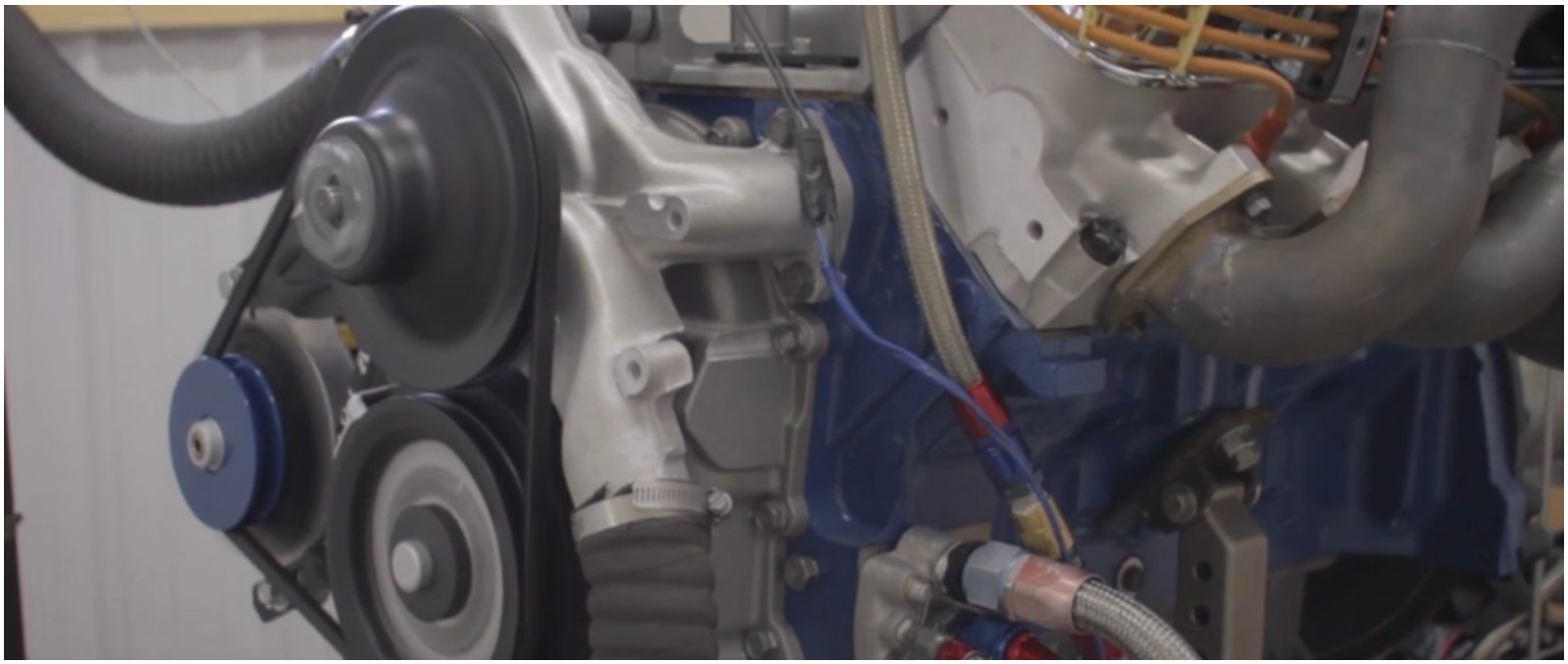
The original 427's were called FE side oilers. The design started with 330 Cubic Inches and eventually reached 428 Cubic Inches.
This was the large Ford engine found in the Galaxies of the 1960's
Later Ford 427's used a different, and smaller, block design.
The "original" "Small-Block" Ford engines are often called "Windsor" models.
The GT-40 Mk1 used the 289 small lock - eventually enlarged to 302 CI.

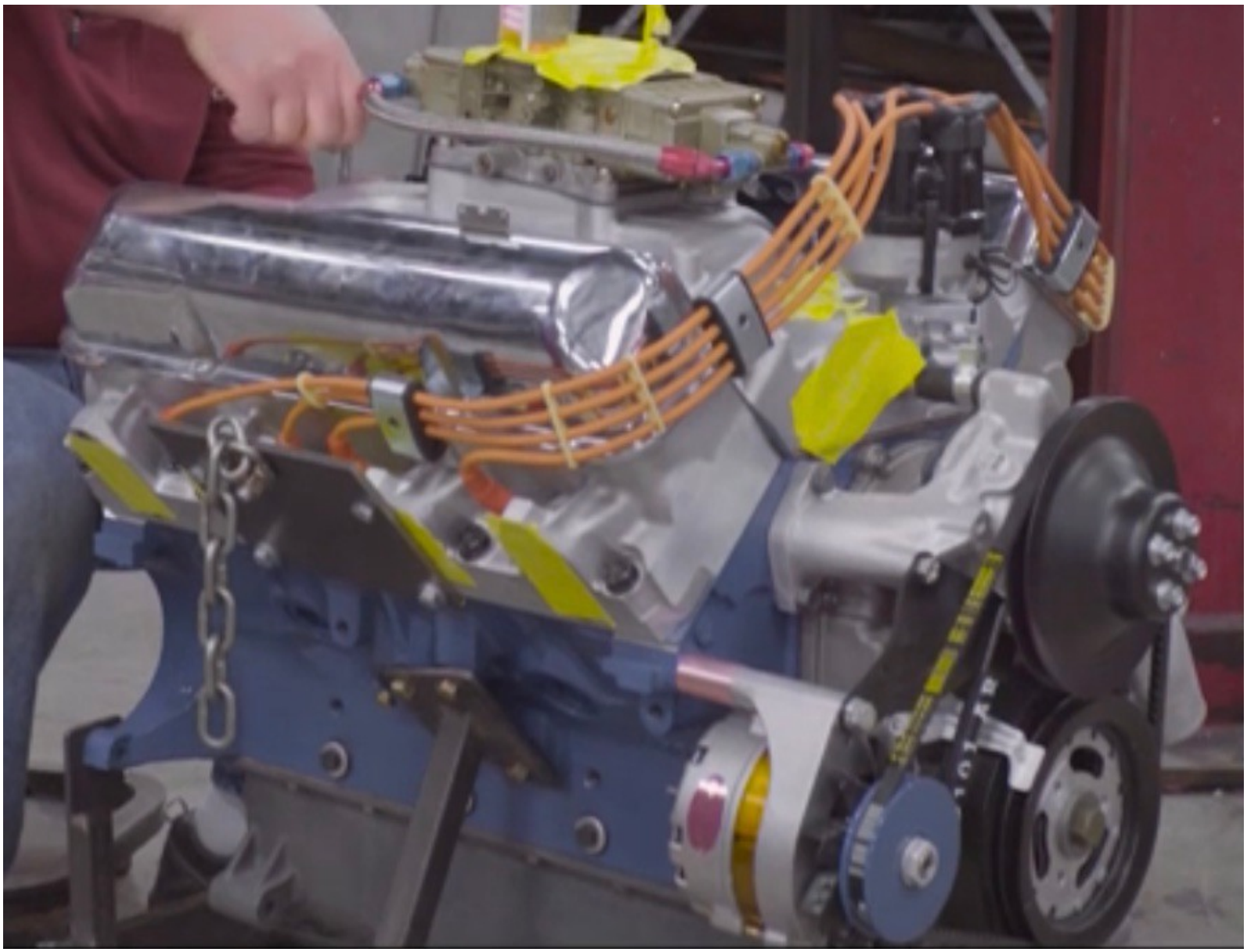
About the models - Neither got it right. Trumpeter appears to have the best overall dimension relationships - it's just too small, like 90%. The plumbing around the engine and engine compartment is either made up, or overly simplified.
Meng's engine block is the right size, but the dimensions are off. The transaxle also seems too large.
Meng's plumbing has its own issues as well, plus the oil lines are smooth, not the braided ones used. Some are just wrong.
I used a 3D 427 FE block kit from 3D Specialties to rebuild the engine. Meng really missed some of the unique details of the blocks used on the G-40 427 motors - the heads are not correct and with the plug wires, it shows.
Both companies totally missed the correct oil hose plumbing. Trumpeter has a part - E17 - mounted in the lower engine compartment and painted orange. Nothing connected, but there.
Looking at the photos on RK Motors site of the restoration of the #2 LeMans car, there are pictures of the lower engine compartment, and one of the 427 being tested which shows alot of the missing details of the oil system. The orange "can" in the compartment, that was the oil filter.
Trumpeter has a part - H3 - that connects two lower connection to the water pipe. In reality these were where the oil lines from the front oil reservoir attached. Lines came out an adapter on the block that ran to the oil filter and the to the base of the cooler and back.
RK motors also has photos of the actual oil lines to the transaxle - both companies are wrong, although Trumpeter is less wrong.
RK has color photos that are great because they restored the car to its LeMans configuration.
If I can find basic photos that show where oil lines run in and around the engine compartment, why could neither Trumpeter nor Meng do it as well. I'm glad I bought the Trumpeter kit - at least I wasn't gouged on the price. Even with the extra parts and motor, it still is far less than the Meng kit costs.

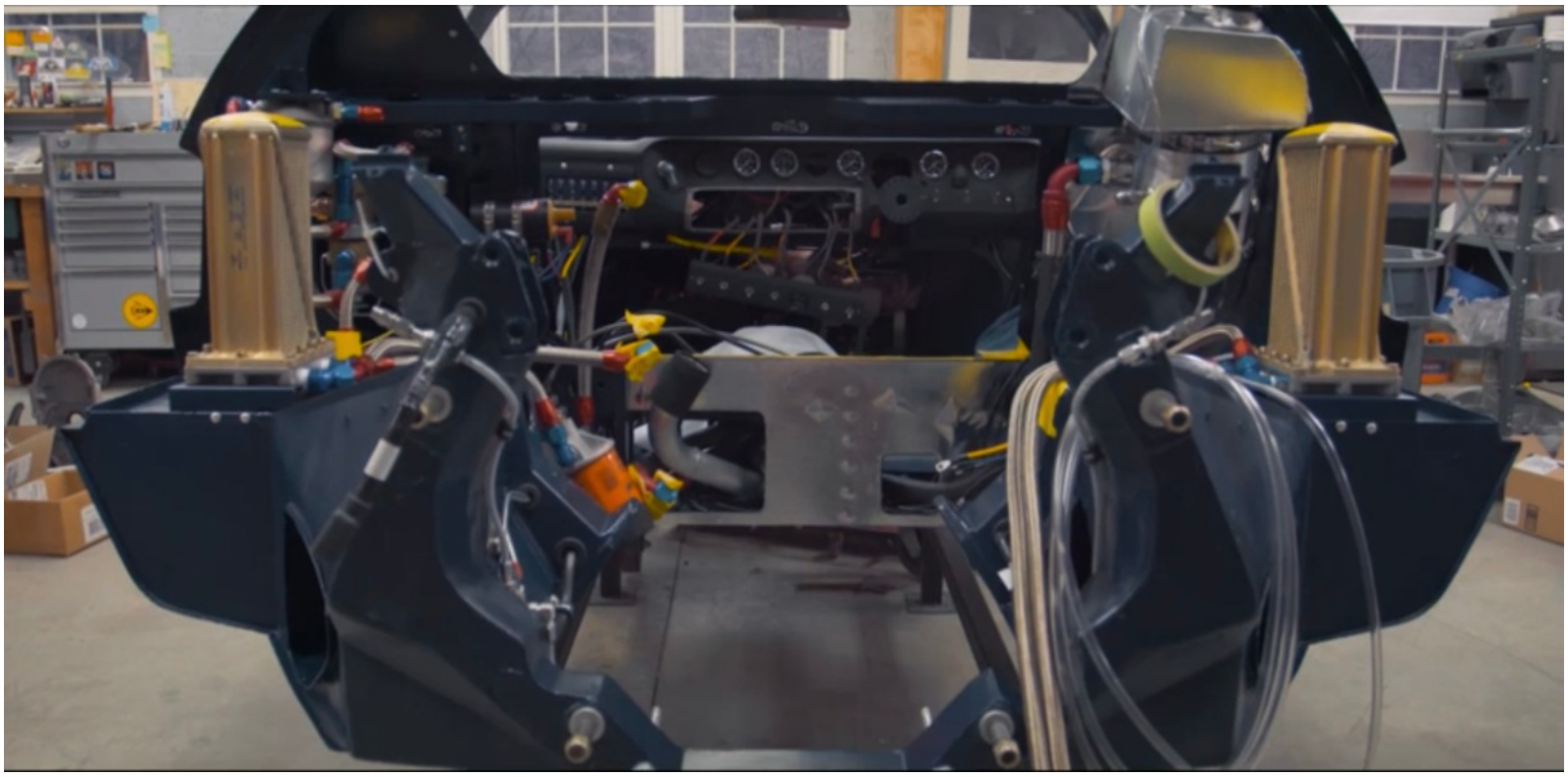
Le Mans Winner – Ford GT40 1046

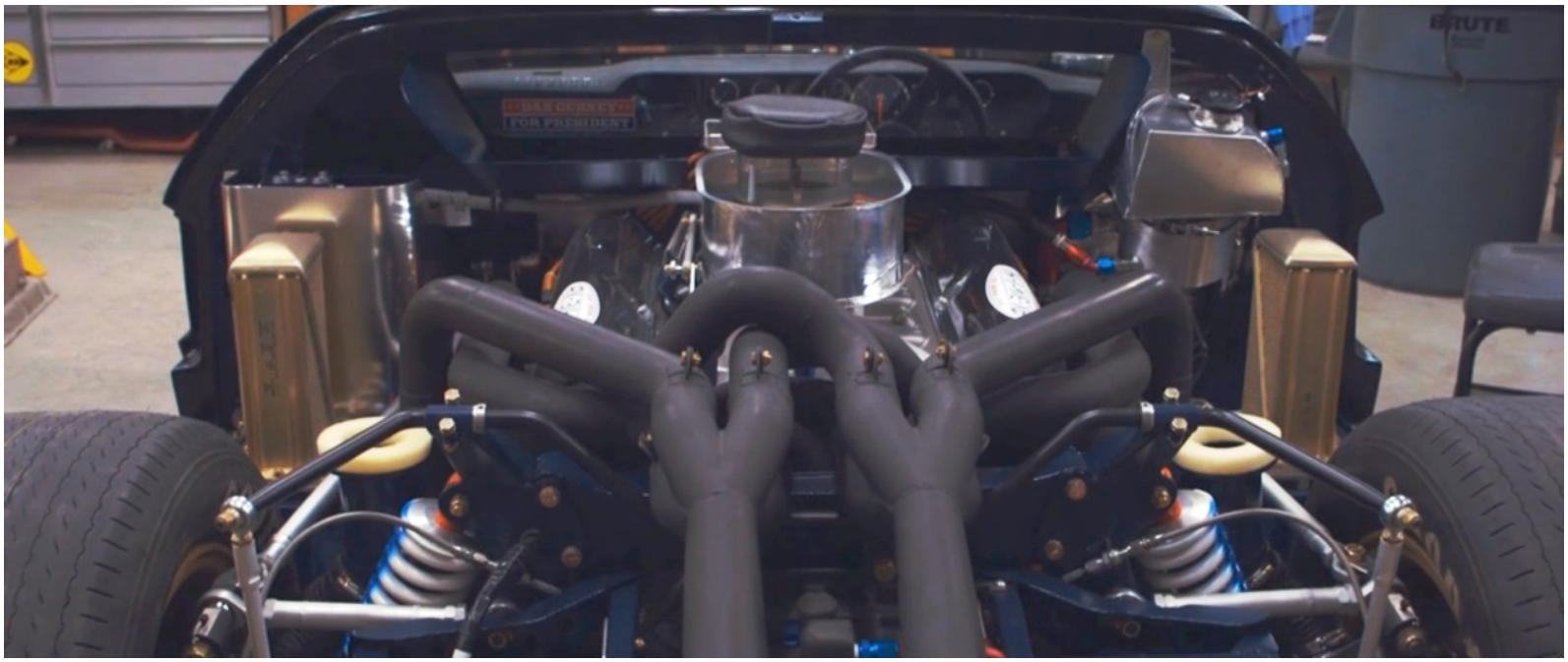

McLAREN

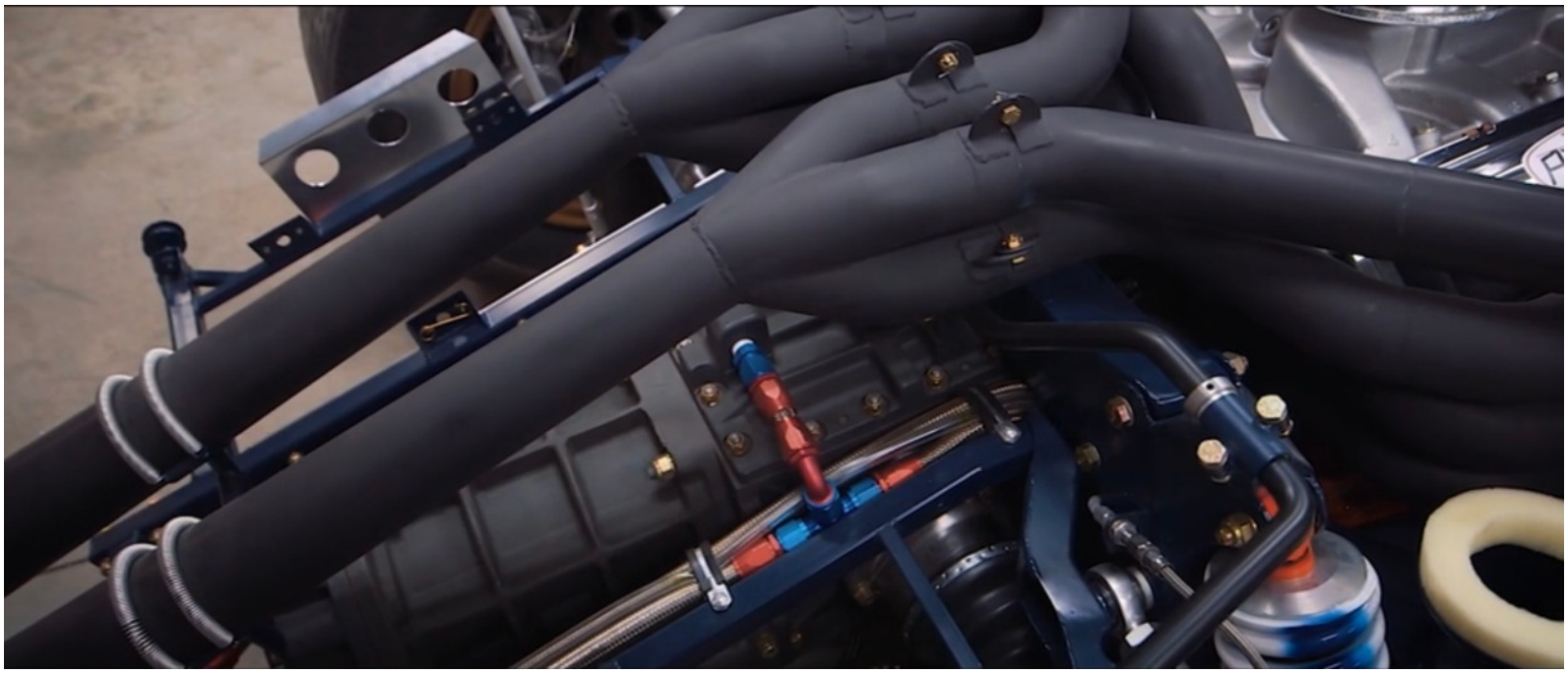


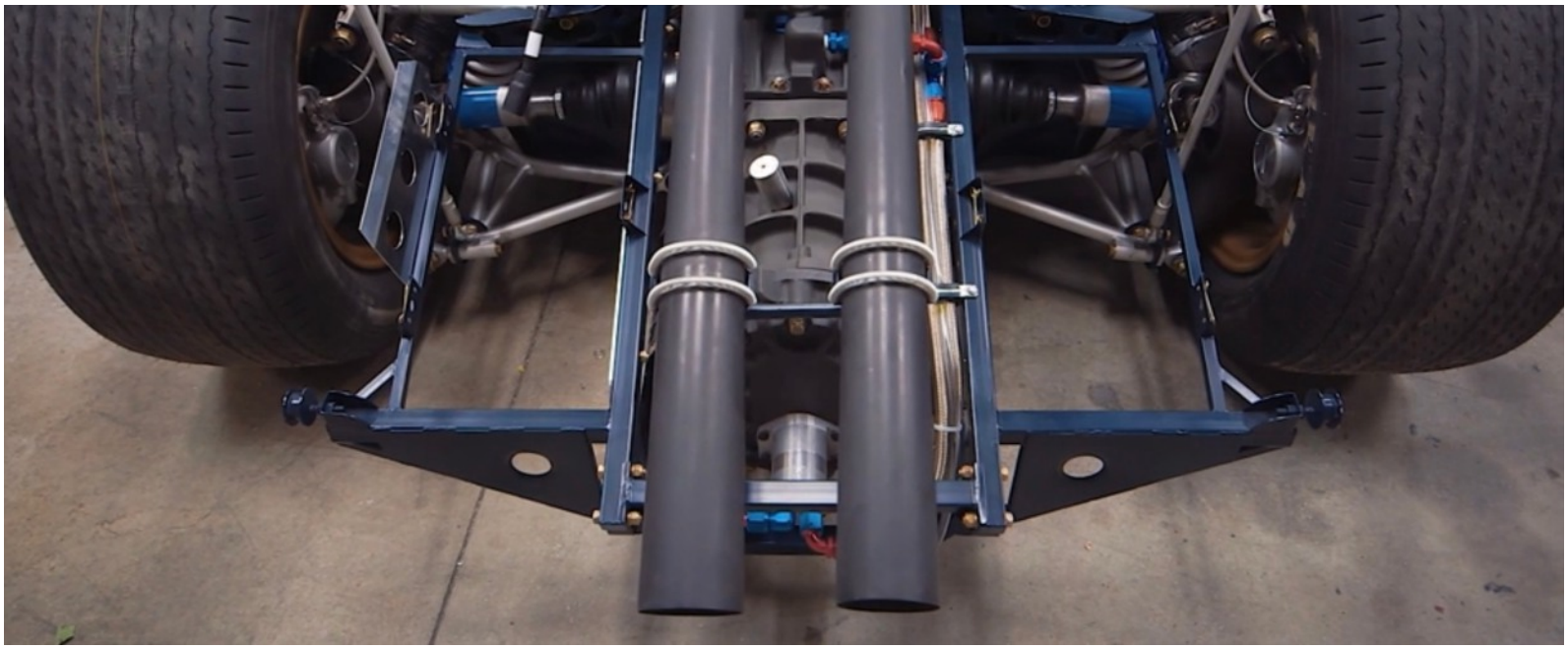




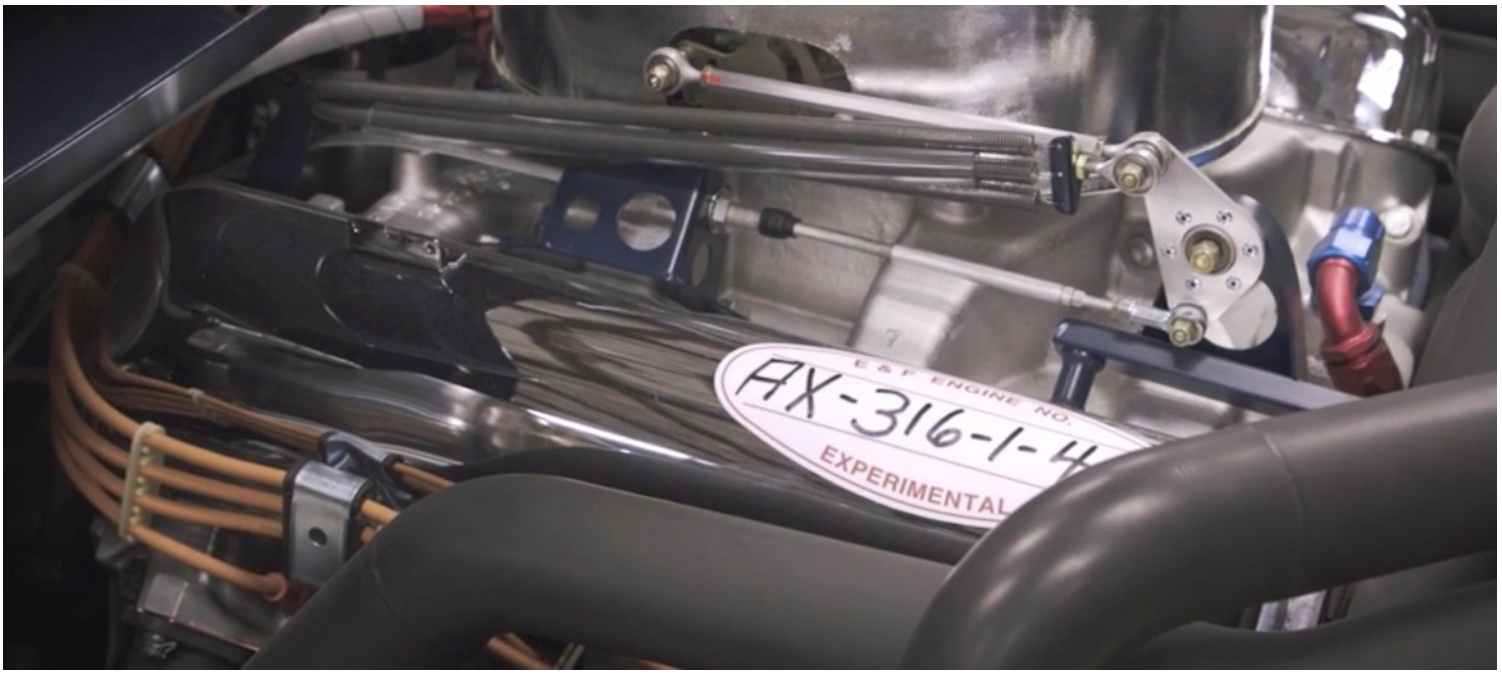









AX-316-1-41
EXPERIMENTAL


AX-316-1-4
EXPERIMENTAL


ENG
OFF
OFF
FUEL
IGN
TURN


STALL
IND.
BOX
OFF
HEAD LAMP
RHEOSTAT
PARK LAMP