

GRAND PRIX, KANSAS STYLE

# MODERN CYCLE

September, 1976 PDC \$1.25

*The Racing Magazine*

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PENNSYLVANIA MX NATS: KAWASAKI  
WINS, BUT SUZUKI RULES - Pg. 26

BLUE BALLS O' FIRE! PHANTOM II FROM OSSA  
NATIONAL HILLCLIMBING  
CHAMPIONSHIPS: UP,  
UP AND AWAY!

360 MONTESA CAPPRA  
-TWIST AND SHOUT!



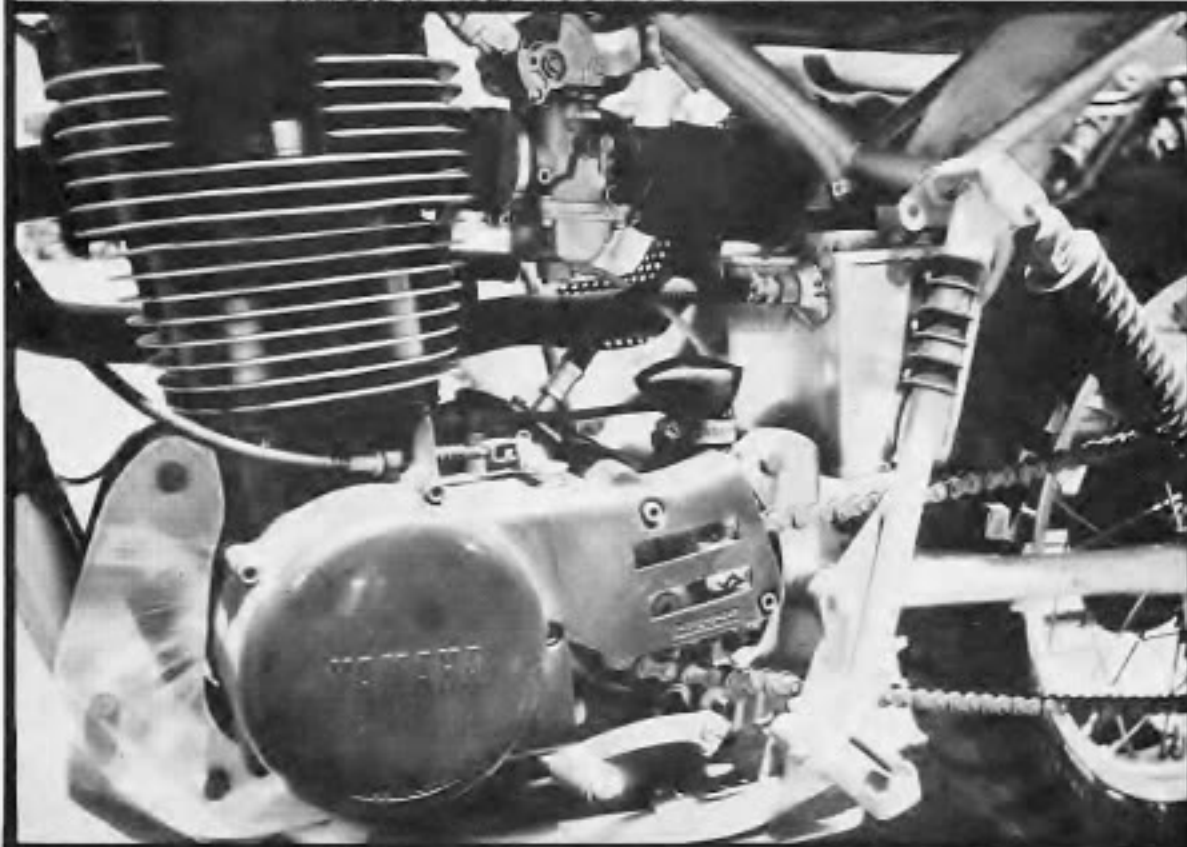
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MIXED BLESSINGS

# YAMAVARNA

*Swapping in the Flagstaff suburbs.*

By Ned Owens



The Yamavarna, ready to go at only 232 lbs., is light for an open class thumper.

Yamaha engine fits the Husky frame like it was built for it. Large motor mount plates and modest skid plate were fabricated from T-6 aluminum.

Seat mounting points were moved forward to accommodate the stock Yamaha seat.





Occasionally we get pictures and sometimes an accompanying narrative on homemade, modified or engine-swap motorcycles.

Many are rather grim as ideas and then worse as realizations. However, this particular machine is good in concept and excellent in execution and details.

Stephen Smith of Flagstaff, Arizona, (an admitted thumper freak from way back) decided to combine the thumpability of the Yamaha TT 500 engine with the fine geometry and light weight of a Husky GP frame.

His result was a well-mannered, 232 lb. Yama-Varna. Smith started with a TT 500. A good bike he felt, but lacking some in the chassis department. The frame, shocks, and tank would have to go.

During the swap, though, he wanted to keep the overall costs down. Compared with current big bore machinery prices, he is right in the ball park, with his best-of-two-worlds machine.

A mechanical engineering student, Smith said, "The most critical ingredient, the frame, was the easiest part of the swap. The GP frame required absolutely no modification to bolt in the engine.

"All that was necessary was the fabrication of motor mount plates utilizing T-6 aluminum. The location and dimensions of the Husky and Yamaha motor mounts were virtually identical. It was almost as if Yamaha contracted Husky to build a suitable frame for the TT engine."

Smith built a rubber-mounted aluminum tank for the dry sump lubrication system that fits neatly between the rear down tubes.

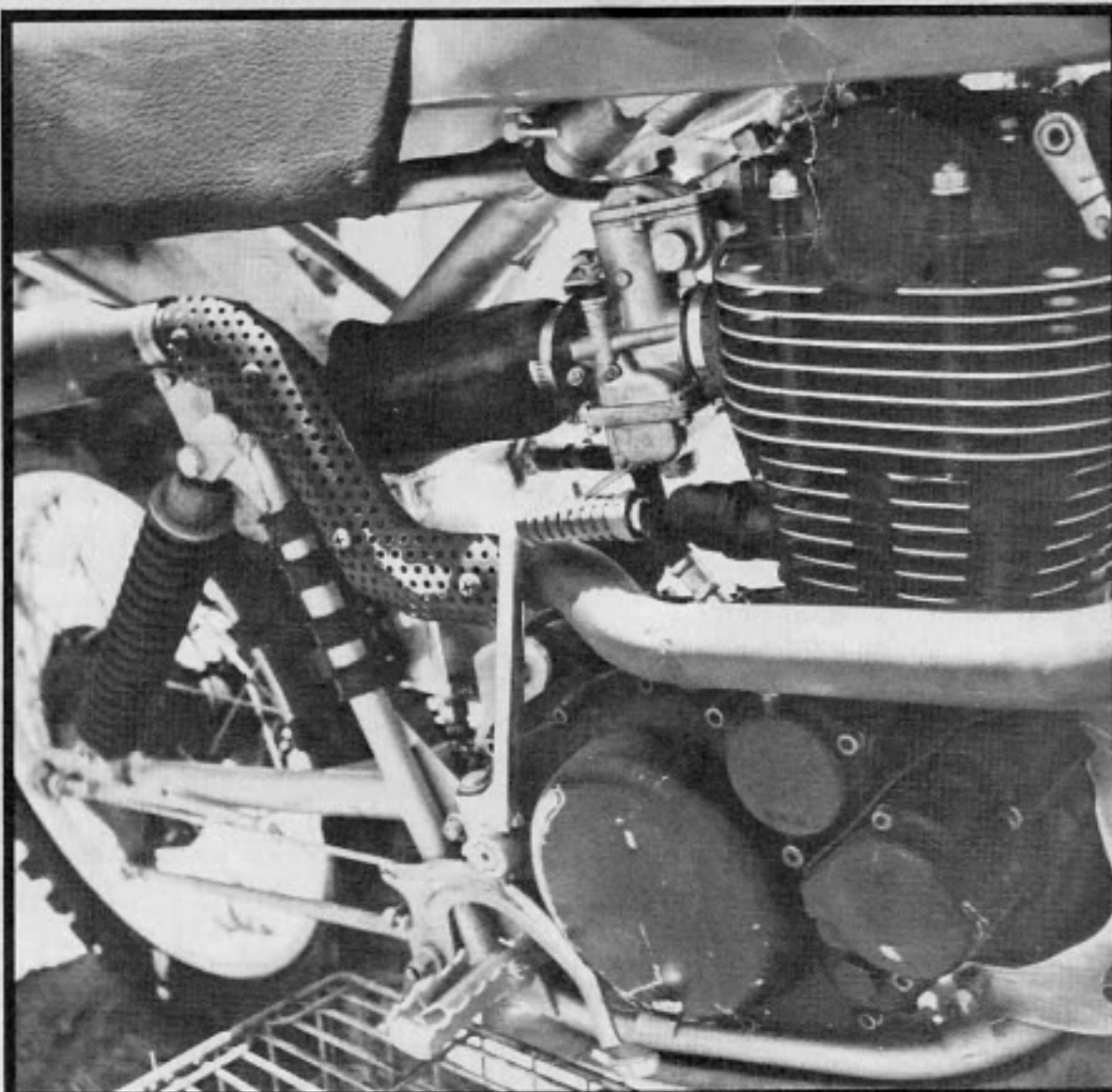
Air conversion and a Number One Products kit went into the forks. The triple clamp stem had to be machined to accept the stock Husky steering head bearings.

Application of the rear wheel was a little more involved. Axle spacers had to be shortened. The slots in the swing-arm had to be widened to accept the larger diameter axle.

The rear brake needed mods, too. By pressing out the bushing in the backing plate and fabricating a torque arm (with aircraft rod ends) the standard Yamaha brake became a floating unit. Smith also shortened the brake actuating lever for a "predictable and progressive rear brake that compliments Yamaha's beautiful front brake."

A pair of 13½-inch gas Girling shocks provide the proper damping in the rear. To accommodate increased travel, Smith bent the rear frame loop up two inches. The Yamaha seat then needed only slight mounting mods to fit perfectly after the upper frame change.

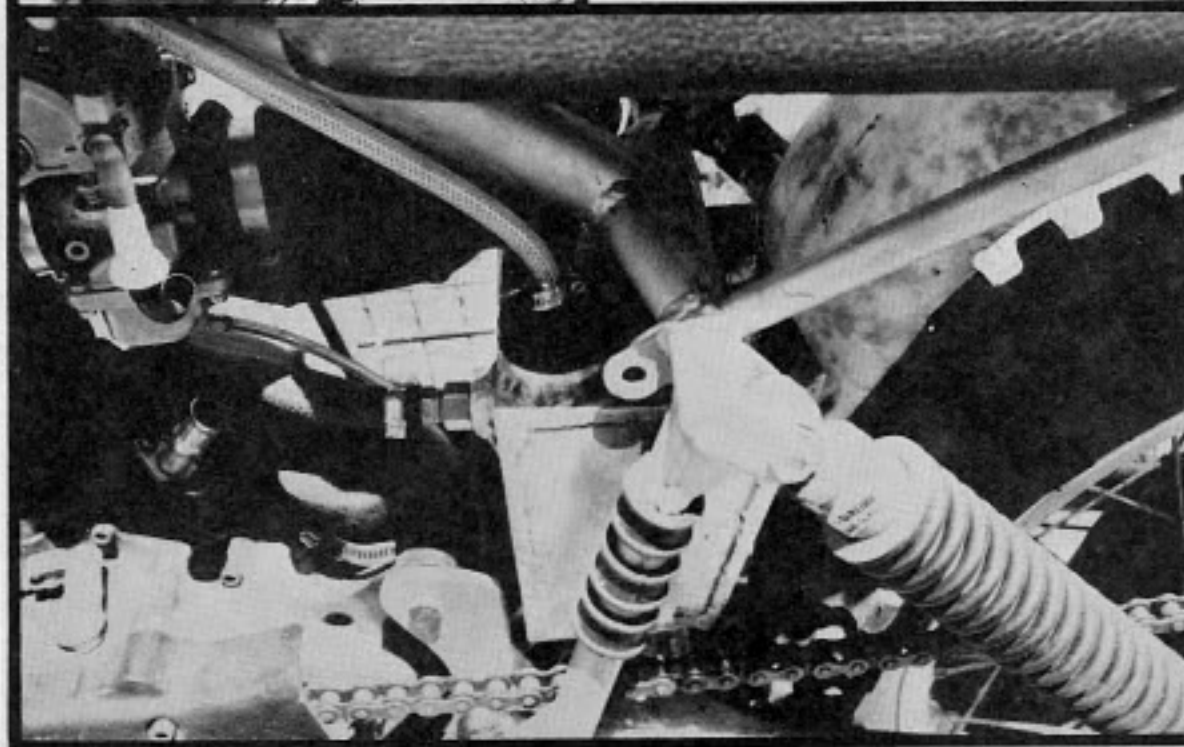
An accessory plastic tank replaced



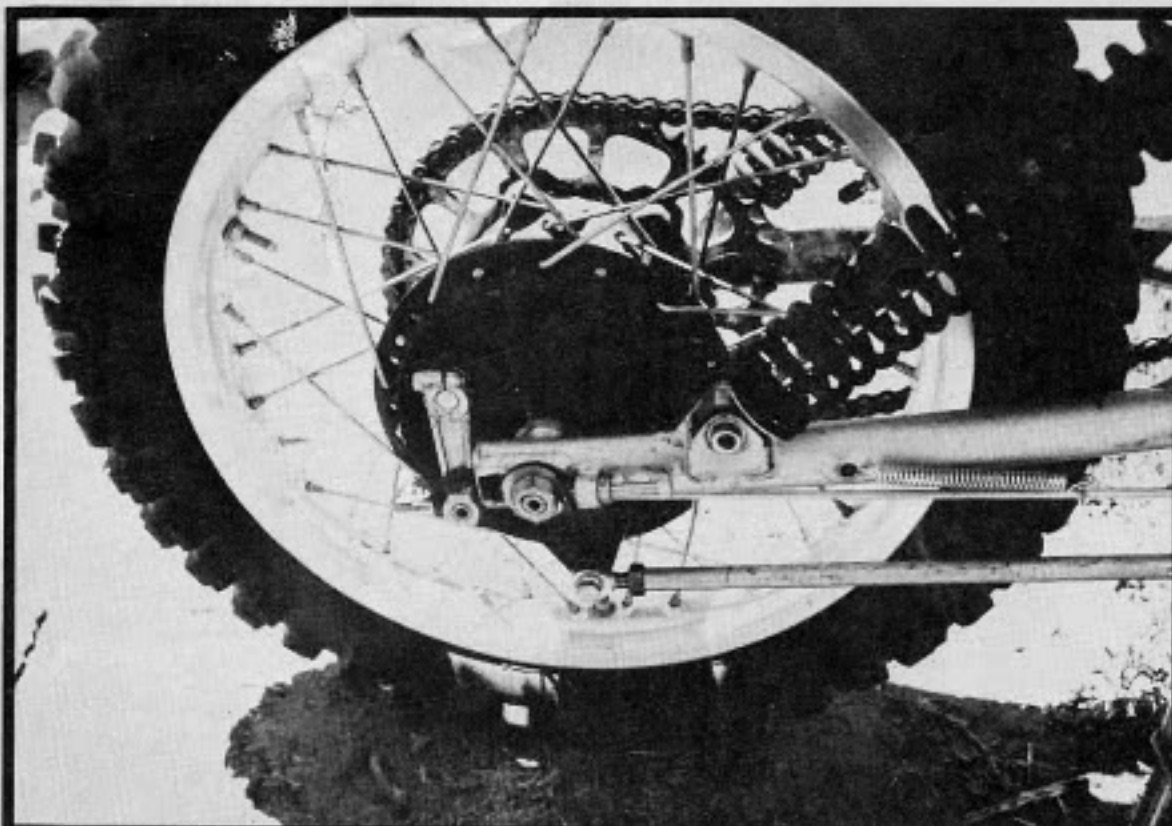
Hand-built pipe is a quality unit that's tucked in and around everything nicely.

Rubber Husky fender mounts were used to suspend the two-quart oil tank.

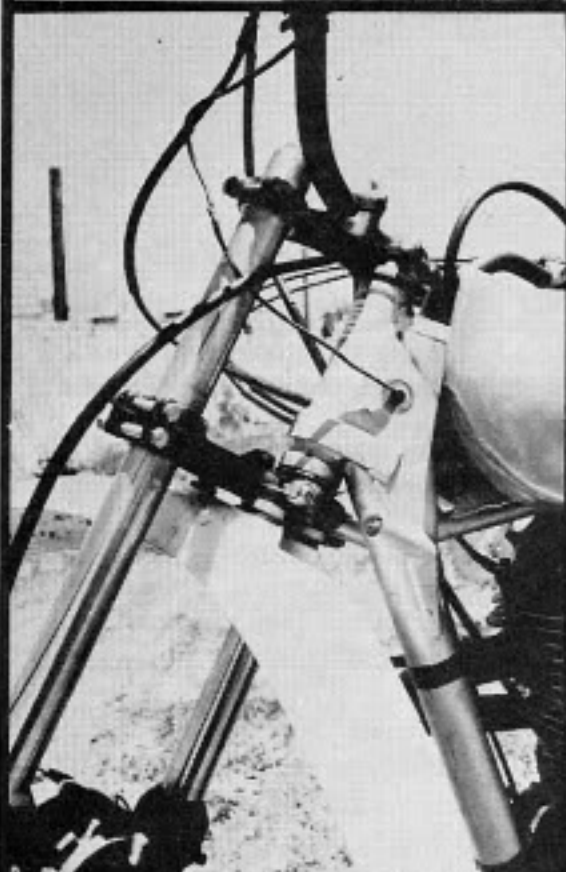
Specially fabricated oil tank fits perfectly between rear down tubes.





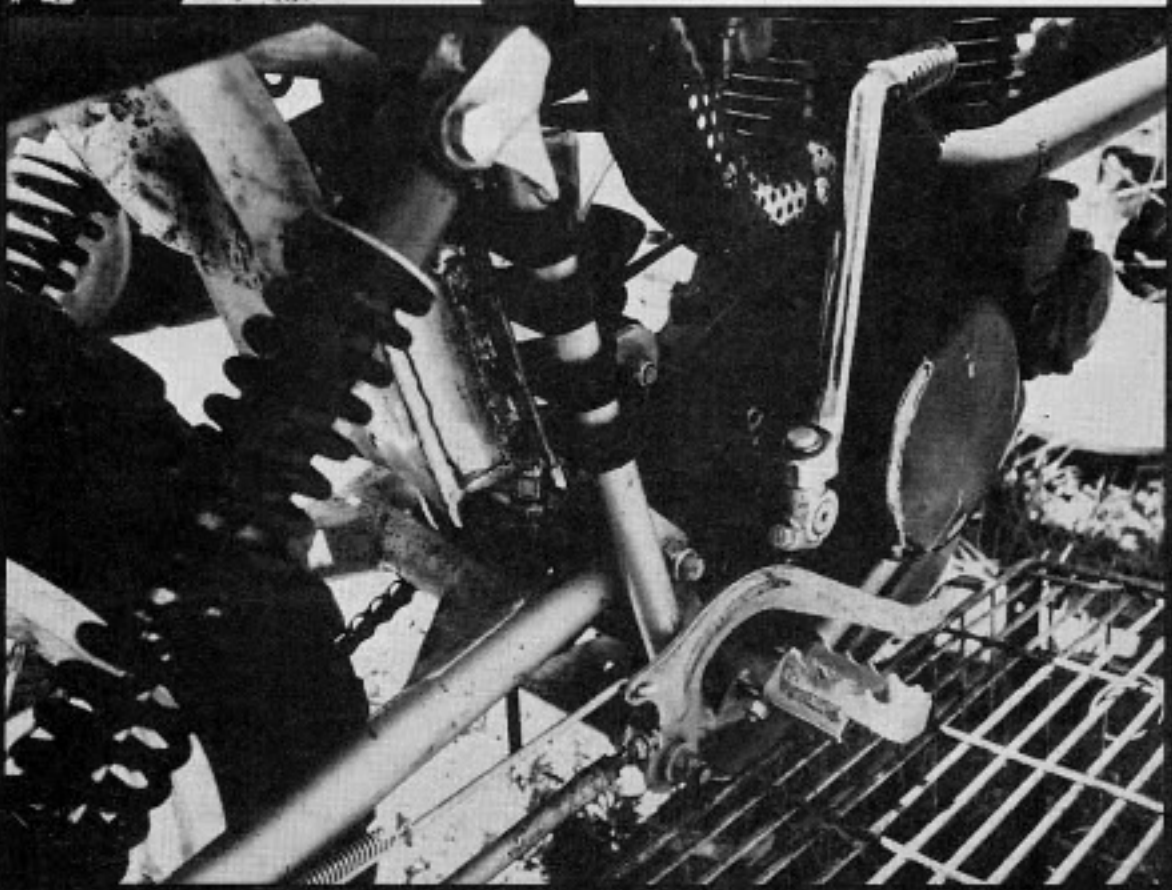


Axle slots were widened and a new torque arm added to rear brake/swing-arm set up. Notice the aircraft rod end.



Yamaha forks fit with minor mods. Top Yamaha nut was brazed to Husky top race, and stem was machined down to accept Husky bottom bearing. Yam forks are lighter than the Husky units.

Rear motor mounts, pipe, oil tank, kick starter and entire engine fits as if it were a factory job.



the bulky stock one and eliminated mounting problems of the metal tank, too.

Future projects include switching to a Super Trapp silencer on his hand-built pipe, and a custom-built air box.

"Probably the nicest part of the swap," Smith admits, "is the price. It can be built for less than the price of a new 360 Husky GP."

Following is a list price breakdown on the parts. Depending on your scrounging ability, money can be saved by buying used parts. Also the frame, swingarm, tank and gas Kayabas from the Yamaha can be sold to help defray some of the expenses.

TT 500 .....	\$1395.00
Husky frame,	
swingarm .....	325.00
Tank .....	40.00
Fork kit .....	25.00
Shocks .....	100.00
Oil tank,	
Machining,	
Misc. ....	100.00
Sub total .....	1985.00
Less parts sold .....	200.00
Total .....	\$1785.00

Smith says he got a great deal of encouragement and assistance from Ray Rossi and Dennis Prescott of Dirt Bike Specialties, the Flagstaff Husqvarna dealer.

Prescott, for all you Honda thumpers, built a Honda-Varna, and was the inspiration for the Yamaha venture.

The Honda effort started with a complete Husky Mag frame. Because of an offset built in the swingarm for the chain and sprocket, the entire assembly was turned upside down. The shock mount tabs were cut off and re-welded to the "new top" of the swingarm.

The Honda engine utilizes a regular full-pan sump so it is taller than the Yamaha. The frame was cut, lowered and moved back to lower center of gravity.

If this sort of swap seems interesting, further details, instructions, the oil tank, motor mount plates and other goodies can be gleaned from:

STEPHEN SMITH  
Box 888A, Route 4  
Flagstaff, AZ 86001  
or:

DIRT BIKE SPECIALTIES  
1702 N. Second St.  
Flagstaff, AZ 86001  
(602) 774-2694

The guys there are into competition bikes, so if you live in the area you might call them for your racing needs. Good people to know.

Swaps really get the imagination going. Lessee, if I could find an old Maico with a dead engine. . . .