

Updates For The Yamaha YZ490

Factory Help For Privateer Racers, From Yamaha's Competition Support Program

New models are wonderful. Incredible power, flawless handling, bulletproof geartrains, there's nothing as good as that new bike . . . at least for the first few weeks or races. As the thrill becomes normal there arises a question: Is this all there is? Is there more power and speed inside this machine, and if so, are there ways for the private owner to find it without destroying the bike at the same time?

There are ways to improve most moto-

cross and enduro models. What's been missing is the link, some way for the average owner to know what works.

Comes now Yamaha's Competition Support program. The factory likes to help racers who aren't fully sponsored, so because these racers use production bikes, there are engineers and tuners at the factory who experiment with stock YZs.

They learn useful things. Then they prepare reports showing what works and how to do it. These reports are sent to dealer-

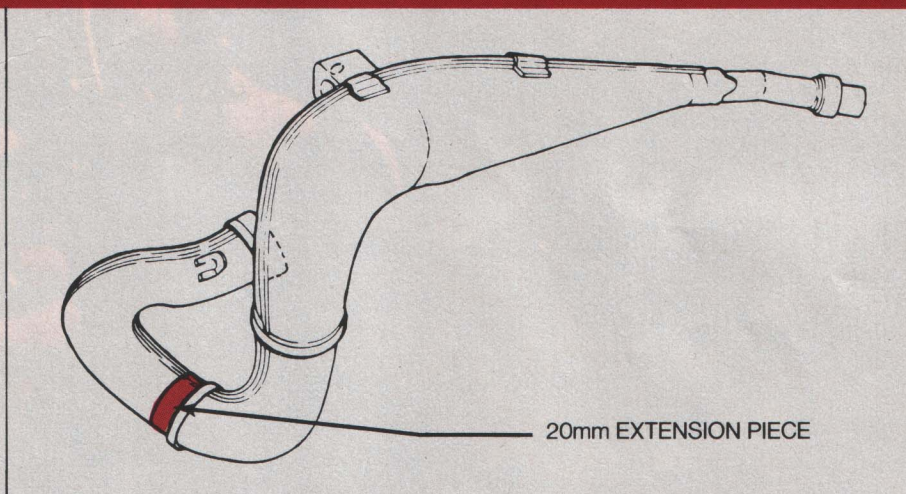
ships and the dealers, in turn, pass the word along to private owners.

Regular readers may recall our problems with chain derailment on our early 1982 YZ490. Because we had the problem, we were sent the Competition Support's Wrench Report (the official name of the bulletins). And because the report contained some other good tips, we got permission to reprint them here:

We'll start with the high-performance mods:

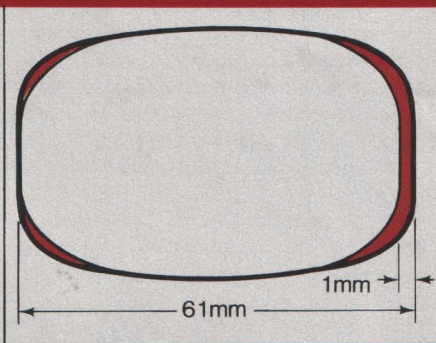
EXHAUST PIPE

Inserting a 20mm extension piece in the exhaust pipe will broaden the low-to-mid-range powerband. Make the extension piece from 16 gauge sheet metal. It must be 20mm in length and the outside diameter should match the o.d. of the headpipe. Weld the piece into the headpipe, as shown in the illustration. To align the pieces properly, tack weld all pieces while they are in place on the bike. (Remove the gas tank before any welding is started so you don't burn the bike and your garage down). After tack welding, remove the pipe and finish the welding.



CYLINDER

The exhaust port can be modified to gain top end power and revs. The modification should be done with a hand grinder. Widen the port 1mm by removing material from the clutch side of the cylinder only. Additionally remove material from the corners of the port, making it more square in shape but being careful the radius isn't decreased too drastically. Any out of alignment in the port should also be smoothed with the grinder.



AIRBOX

Air flow to the air cleaner can be increased by drilling the left side of the airbox. Use a 7/16 in. drill bit and drill as many holes as possible. Then pop-rievet a piece of fine-mesh wire to the inside of the box, over the holes, to keep mud out.

GEARING

Yamaha recommends changing the rear sprocket from a 44 to a 46 tooth. Few motocross racers need a bike geared for 80 mph. The larger rear sprocket will lower the top speed and improve your chance of being first into the first turn. >

JETTING

The modifications to the exhaust pipe, air box and ports will naturally change the engine's fuel demands and you'll need to rejet the carb. This procedure isn't in the

report for the YZ490. But the technique, for any carb, is described in Wrench Report No. 19, which should be in your dealer's files.

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San Diego	May 30-June 5
Orlando	June 4-13
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Pittsburgh	June 13-20
Atlanta	June 21-27
Hampton, Va.	June 24-27
New York	June 25-July 4
Cincinnati	July 12-18
Minneapolis/ St. Paul	July 13-18
Seattle	July 30-Aug. 6
Milwaukee	Aug. 11-15
Newport, R.I.	Aug. 21-22
Chicago	Aug. 30-Sept. 5
Detroit	Sept. 1-6
New Orleans	Sept. 15-19
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RACE PREPARATIONS

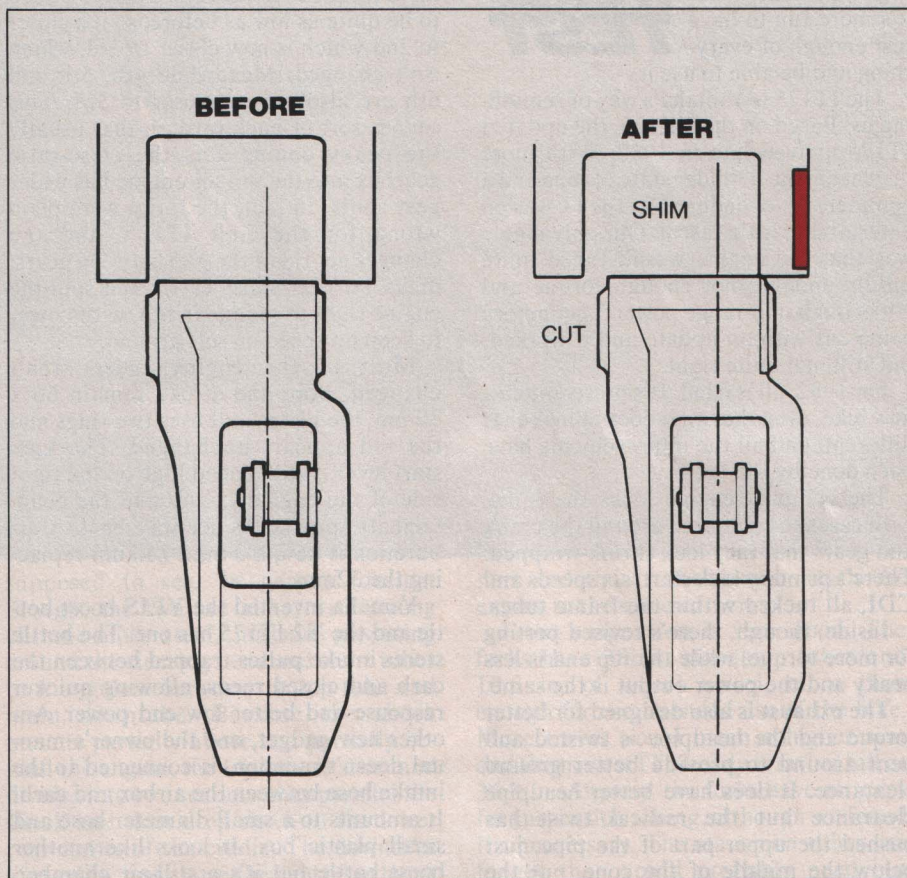
1. Slip a piece of gas cap vent hose over the air filter wing nuts to make sure they don't work loose or fall off.

2. Check the alignment of the drive chain in the chain guide. If the chain isn't centered in the guide, the guide will need modification. The chain guide wasn't right on some of the early bikes and the misalignment will cause chain derailments. We went through five chains and a transmission on our test bike as the result of an out-of-alignment guide. Use the drawing as a guide and grind the side of the plastic block until the chain is centered, then use

washers to shim the block opposite the side that was ground.

3. The rear axle adjustment location marks were off on some early bikes. Carefully measure from the center of the swing arm pivot bolt to the first mark on each side of the arm. If the marks are different lengths, either remark one side of the arm, or better yet, sight down the chain when chain tension adjustments are performed.

4. Inspect the YEIS (boost bottle) hose. If it is kinked, shorten the hose enough to remove the kink., 20mm should do it.



SHOCK OIL

Another modification common in our area and one Yamaha performed on our YZ490 before we got it for the second round of testing, is changing the shock oil. Replacing the standard oil with high-quality oil and moving the reservoir piston about 10mm makes the rear of the '82 YZ work much better. The simple change removes almost all of the kick over square-edged holes and such. It's not something you should attempt in your garage though. Take the shock to your Team Yamaha Center and have them do it. The shock

will need recharging with nitrogen after the alteration. Recharge with the standard setting of 125 psi.

In closing, we feel Yamaha is on the right track with the Competition Support Wrench Report. Too bad all manufacturers don't have a similar update system. Yamaha's Competition Support crew modified our test 490 and the difference in the way the bike performed was truly amazing. If you have a new YZ don't hesitate to perform some or all of these mods. It could give you the winning edge.