

A POWERFUL ADVANTAGE



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PERFORMANCE

1992-1994 YAMAHA V-MAX4 STAGE I TRAIL QUAD PIPE
YVX4-04 INSTALLATION INSTRUCTIONS

NOTE: THESE PIPES ARE DESIGNED FOR STOCK OR SLIGHTLY MODIFIED ENGINES. FULLY MODIFIED MACHINES SHOULD USE THE "02" LAKE QUADS

1. Remove stock exhaust system.
2. Flatten front pipe rest so bottom of pipe rest lays on frame tube.
3. Trim front inside corner of front right hood vent lip. Trim until rivet is removed. Re-rivet screen in center of lip with one supplied rivet.
4. Install supplied heat shield to belly pan. Heat shield goes between exit hole and middle hinge of side panel. Rivet to belly pan with 1 supplied rivet.
5. Install one supplied spring clip to lower rear chain case mounting bolt. Point clip in the 9 o'clock position.
6. Reroute radiator pan overflow hose around mag cylinder and secure to loop on rear of crankcase with supplied cable tie. Bend up hook that held hose.
7. Install supplied sealing rings in grooves of exhaust flanges. Install exhaust flanges to cylinders with supplied gaskets and spring clips.
8. Install #1 pipe (1 dot on head pipe) to right cylinder and secure with two supplied springs. Install #2 pipe (2 dots on head pipe) to right inside cylinder and secure with two supplied springs. Install #3 pipe to left inside cylinder and secure with two supplied springs. Install #4 pipe to left cylinder and secure with two supplied springs.
9. Install supplied rubber bumper to mount on #3 silencer (3 dots on silencer cap.)
10. Install #1 silencer (1 dot on silencer cap) to #1 pipe and secure with one supplied spring. Install #2 and #3 silencer to #2 and #3 pipes. Secure with two supplied springs. Install #4 silencer to #4 pipe and secure with one supplied spring.

NOTE: PSI recommends using a high temp. silicone on these connections.

11. Install one supplied spring to small hole in front of forward pipe rest and hook other end to spring clip on #4 pipe body.

YVX4-04 (cont.)

-2-

12. Install one supplied long spring by hooking one end to large hole in chassis just below recoil. Stretch spring over pipes and hook other end of spring to spring tab on #1 exhaust flange.
13. Install one supplied spring to clip that was installed on chain case. Hook other end to spring clip on #2 silencer end piece.
14. Re-install hood cable springs to middle springs of exhaust flanges.
15. Check for clearance between #4 pipe and lip that was trimmed. Be sure all end pieces exit completely out exit hole.

YVX4-04-02 YAMAHA VMAX-4 STAGE II MOD QUAD PIPES

JETTING SPECS: SEA LEVEL

SAFE TO 10 Degrees:

	STOCK	PSI QUAD	PSI QUAD PIPES
	PIPE	PIPES	W/PORTING
PILOT	47.5	47.5	47.5
AIRSCREW	2 TURNS	2 TURNS	2 TURNS
NOZZLE	499 Q-4	499 Q-4	499 Q-4
NEEDLE	6GN14 3RD	6GN14 3RD	6GN14 4TH
MAIN	135	137.5	145

*For high altitude, lean 1 main jet (2.5 increment) each 1200-1500 feet above sea level.

It is mandatory to use premium fuel 92 or better octane for these pipes! Our jetting specs were developed on a 1993 model.

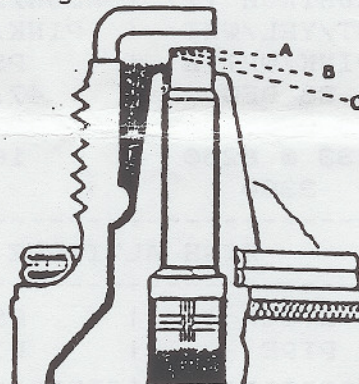
FUEL MIXTURE:

The proper fuel mixture can be easily determined by reading the NGK Spark Plug electrode if NGK "EV" series plugs are used. The NGK "ES" series spark plugs are used as standard equipment and are very difficult to read.

To determine correct main jet size, first install the "EV" style spark plugs. Then run the machine over a safe driving course at full throttle for a distance of one or two miles. While holding the throttle lever in the 3/4 to full throttle position, hit the safety kill button, and stop quickly.

When the machine comes to a stop, release the throttle lever and remove the spark plugs. Observe electrode color. If the entire electrode is black, mixture is too rich, select the next smaller main jet size and repeat the test.

When the main jet size is correct, the center electrode will have a silver crown appearance, which starts at the top and tapers down 1/3 of the electrode side. If it goes past 1/3 of the electrode length, the mixture is too lean and you must increase the main jet size or engine damage will occur. See Diagram:



To read spark plug electrode for proper main jet size, refer to the diagram.

- A-Indicates a rich condition.
- B-Indicates a correct main jet.
- C-Indicates a lean condition.

Anything below B would be lean with C being near the burndown point. The crown will be a metallic color.

YVX4-04 YAMAHA VMAX-4 STAGE I TRAIL QUAD PIPES

*NOTE: 1992 CLUTCHES MUST BE UPDATED WITH 1993 WEIGHTS!

CLUTCHING SPECS:

SEA LEVEL (0-3,000)

	STOCK PIPE	PSI QUAD PIPES	PSI QUAD PIPES W/PORTING
WEIGHTS	89A10	89A10	89A10
RIVET	STEEL/ALUMINUM	STEEL/STEEL	STEEL/STEEL
PRIMARY SPR.	WHT/PNK/WHT	PINK/PINK/PINK	PINK/PINK/PINK
SEC. SPR.	PINK/WHITE	PSI BLUE	PSI BLUE
SEC. CAM	38 DEG.	47/44-39 DEG.	47/44-39 DEG.
SEC. SETTING	33 DEG. A-3	33 DEG. B-3	33 DEG. B-3
*HP/SHIFT RPM	133 @ 8250	165 @ 8300	180 @ 8400
*ENGAGEMENT	3300	3800	3800

MEDIUM ALTITUDE (3-6,000)

	STOCK PIPE	PSI QUAD PIPES	PSI QUAD PIPES W/PORTING
WEIGHTS	89A10	89A10	89A10
RIVET	ALUMINUM (2)	ALUM/SHORT STEEL	ALUM/SHORT STEEL
PRIMARY SPR.	WHT/YEL/WHT	PINK/PINK/PINK	PINK/PINK/PINK
SEC. SPR.	PINK/WHITE	PSI BLUE	PSI BLUE
SEC. CAM	38 DEG.	47/44-39 DEG.	47/44-39 DEG.
SEC. SETTING	43 DEG. A-3	33 DEG. B-3	33 DEG. B-3
HP/SHIFT RPM	133 @ 8250	165 @ 8300	180 @ 8400
ENGAGEMENT	3300	3800	3800

HIGH ALTITUDE (6-10,000)

	STOCK PIPE	PSI QUAD PIPES	PSI QUAD PIPES W/PORTING
WEIGHTS	89A10	89A10	89A10
RIVET	NONE	1-SHORT STE. OUTSID	1-SHORT STEL. OUTS
PRIMARY SPR.	WHT/YEL/WHT	PINK/PINK/PINK	PINK/PINK/PINK
SEC. SPR.	PINK/WHITE	PSI BLUE	PSI BLUE
SEC. CAM	38 DEG.	42-37 DEG.	42-37 DEG.
SEC. SETTING	43 DEG. B-3	43 DEG. B-3	43 DEG. B-3
HP/SHIFT RPM	133 @ 8250	165 @ 8300	180 @ 8400
ENGAGEMENT	3500	3800	3800

*1992 engines will operate approximately 200 RPM lower than our specifications. If PSI pipes are used on a 1992 model with updated porting and CDI box refer to listed specifications.

* The Arctic Hex Drive Green Spring will provide about 200 RPM higher engagement with similar shift characteristics.

Warranty & Repair

LIMITED WARRANTY

PSI, INC. will repair or replace any PSI product determined by the company to be materially defective within 60 days from date of purchase, without exception, when used under normal conditions, at no charge.

A copy of the original invoice must be supplied with any item sent to us for warranty repair or exchange, along with a brief letter of explanation. Warranty items without necessary documentation will not be processed. Items returned for warranty will be repaired or replaced only. No cash refunds given.

Transportation and/or shipping costs are not included in the terms of this warranty. For protection against loss or further damage during shipping, pack securely and insure your package.

Performance parts installation and use requires technical and mechanical skill. Because of the custom nature, racing type abuse, and the limitless application variables these products are subject to, all performance products are sold with a limited warranty only. PSI, INC. will not be held responsible for failure due to improper assembly, weather and fuel conditions, modification of parts or instructions, neglect, abuse, accident, and/or normal wear, including failure to provide reasonable and necessary maintenance or applications not included within the scope of PSI research and development. No claim for charges incurred in the removal, disassembly or reinstallation of warranty items will be allowed.

PSI, INC. will not be held liable for any injuries incurred as a result of the use of any of these products nor the parts these products may affect. Further, PSI, INC. is not responsible for damages of any nature relating to parts incorrectly installed, or not properly tuned, when used in conjunction with consumer or another company's modifications, nor additional wear of stock components and parts PSI products may affect.

PSI, INC. makes no warranty of any kind, express or implied, except that PSI will replace any original equipment of its own manufacture determined to be materially defective within 60 days from date of purchase from PSI, at no charge. Damage to other components as a result of PSI product installation or failure is not subject to warranty coverage.

PSI INC. does not authorize any other person to assume for PSI any other liability or additional warranties in connection with the goods sold, and there are no oral agreements or warranties collateral to or affecting this agreement. Additionally PSI will not be held responsible when dealers or distributors warranty items prior to or without PSI consent, or beyond the limits of stated PSI terms.

Any item distributed, but not manufactured by PSI INC., should be sent directly to the individual manufacturer for warranties which may apply to such products.

Statements or descriptions are informational only. It is the purchasers' responsibility to determine that the application of our products are within the limits of their intended use.

PSI INC. reserves the right to change product specifications and/or price without notice. Updates and continuing research and development to model equipment do not constitute warranty.

This limited warranty is effective September 1, 1994 and supersedes any prior warranties, express or implied, of any kind.

SILENCER REPACKING

Due to the concerns we have of excess noise on the trail systems, we recommend repacking of your silencers every year (approximately every 1500 miles). This is important for more than noise reasons. Silencer packing also provides a cushioning effect on internal parts, and properly packed silencers help reduce vibration and reduce internal parts breakage.

Equally important, performance is not at its peak level if silencer packing is not maintained. Performance pipes have internal back pressure designed into them, which is necessary for proper tuning! If this back pressure is not maintained, a loss of performance will occur. By servicing your exhaust pipe silencer, performance and noise levels will be restored.

You are now ready for another season of Great Performance!

Repack-1 - Single Pipe Repack Kit	\$12.95
Repack-2 - Twin Pipe Repack Kit.....	\$20.00
Repack-3 - Triple Pipe Repack Kit	\$30.00
Repack-4 - Quad Pipe Repack Kit	\$40.00

PIPE REPAIRS

PSI offers a complete repair service on all exhaust pipe products. We can repair dents, broken flanges, spring clips, or silencer parts. All repaired pipes are repacked, repainted and returned to you in like new condition.

Most repairs require about 2 weeks to turn around but do not take precedent over production. Generally repairs range from about \$35.00 to \$70.00, depending on the amount of damage. You will be contacted should there be any questions or if repair cost exceed normal. Sorry, we cannot repair another manufacturer's product.

Shipping additional.

Terms & Conditions

HOURS: We are open for telephone or pick-up orders Monday through Friday from 8:00 a.m. to 6:00 p.m. (C.S.T.) Open Saturday by appointment only. Pre-arranged pickups on parts are helpful. Closed Sunday.

ORDERING: Call for fastest service 414-622-4555. Mail orders welcome. Our FAX line is always open 414-622-4477 / 24 hours a day! All orders will be processed as quickly as possible-usually the same day. For mailing or faxing an order please include your complete shipping & mailing address, and your complete telephone number should we have any questions. If using Visa/Mastercard/Discover please supply us your complete card # and expiration date.

BACKORDERS: PSI ships all Back Ordered items unless customer specifies not to. Refused backorder shipments are subject to refused COD package terms below.

PAYMENT: All orders will be shipped COD (Except Outside U.S. - See below) UPS will collect cash, certified check, or money order. **No personal checks will be accepted** without prior authorization. PSI does accept **VISA, Master Card, and Discover**. Please have card number and expiration date ready when placing your order. All credit card purchases are subject to credit limit pre-authorization. All orders outside the U.S. **MUST** use one of the above credit cards (no COD service available), and are subject to a \$15.00 Customs Preparation Charge. Sorry, no open accounts.

SHIPPING: All orders will be shipped United Parcel Service unless otherwise specified. All rush orders must be received by 2:00 p.m. CST. Rush orders received and shipped after 2:00 p.m. will be subject to an additional **\$10.00** rush handling fee.

CANADIAN: Canadian customers—
We welcome you to contact our 3 Canadian Distributors!!

CYCLE WORKS
9918 71 Ave.
Edmonton, ALB T6E0W7
(403)439-4921

GAMMA SALES
RR 1 Progress Ind. Park
Orilla, ONT L3V6K7
(705)325-3088

KIMPEX
5355 St. Roch
Drummondville, Quebec J2B6V4
(819)472-3326

SWEDEN:
Our Swedish Distributor is

TIKKA RACE IMPORTS
STORGATAN 36
JOKKMOKK, SWEDEN 96232
011-46-971-10466

DEALERS: Only REGISTERED dealers with approved applications on file at time of order will receive dealer pricing and company check privileges. To become an established PSI dealer, please contact our office for a copy of our Dealer application. Return it to us with all required information. PSI will, at its own discretion, accept or decline dealers, and distribute dealer prices accordingly. Incomplete applications will not be processed.

RETURNS: All returns are for exchange or credit only. No refunds given. Returns and overages for credit must be received within 20 days of shipment and MUST include a copy of the original invoice, a letter of explanation with your name, address, and telephone number. Returns with incomplete information will not be processed. **All returned items must be in new condition.** No returns on used merchandise and they are generally subject to warranty terms only. **We cannot accept returns of special orders or electrical parts for any reason.** A firm 15% restocking fee will be charged on all returned items.

SHORTAGES: Must be reported within 5 days of receipt. Please check your order carefully when it arrives.

REFUSED COD SHIPMENTS: PSI charges a firm 15% restocking fee to your account and shipping both ways should you order merchandise, change your mind, and refuse the package, when we ship the item within 30 days of order placement. These charges are the purchasers responsibility, and become a collection item with the addition of collection costs if not paid within 30 days.

SHIPPING TO PSI: Whether shipping to us for Modification or any other reason, PLEASE be sure items are wrapped well and packed securely. We cannot not be held responsible for items damaged due to improper transit. Any claims for such damages should be made directly to your freight carrier.

MODIFICATIONS: Items sent to PSI for modification should include a letter with your name, address, telephone number; the year, make, and model of the machine; as well as the services desired, type of fuel and the intended use of the machine.

PRICES: All prices for products and services are effective August 1, 1994, and are subject to change without notice. We will always do our best to keep prices at a minimum.

TECHNICAL ASSISTANCE: We are more than happy to help you with any technical questions you may have regarding PSI products, please feel free to call (414)622-4999. As we are trying to handle many calls daily, please help us expedite your calls quickly. **Before calling please read your supplied instruction sheets from front to back.** Write down your questions to be sure we cover what is most important to you. Please do not write tech letters. We appreciate your letters, but due to the nature of our products, most tech letters cannot be answered properly without either more information or questions. Call for **FASTEST** results.

MAILING ADDRESS: PSI PERFORMANCE
P.O. Box 72
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WILD ROSE, WI 54984

(414) 622-4555 - Ordering-General Information

(414) 622-4999 - Technical Assistance

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