DYNOJET RESEARCH

CARBURETOR RECALIBRATION SYSTEM

SPECIFICATIONS AND INSTRUCTIONS

USA ONLY FOR COMPETITION AND OFF ROAD USE ONLY BY FEDERAL EPA LEGISLATION WHEN USED ON MOTOR-CYCLES MFG. AFTER JAN.,1978

DI0007

FORWARD

IMPORTANT IMPORTANT

THE DYNOJET SPECIFICATION AND INSTRUCTION MANUAL IS DESIGNED IN SUCH A MANNER AS TO ENCOURAGE ITS USAGE. FAILURE TO PERFORM THIS INSTALLATION IN THE MANNER GIVEN MAY COMPROMISE THE RECALIBRATION KIT'S OVERALL PERFORMANCE. THE DYNOJET RECALIBRATION KITS ARE EASILY INSTALLED IF THE INSTRUCTIONS ARE FOLLOWED.

PLEASE READ THE INSTRUCTIONS CAREFULLY.

THE DYNOJET RECALIBRATION SYSTEMS ARE DESIGNED TO MAKE FULL USE OF THE PERFORMANCE POTENTIAL OF YOUR MOTORCYCLES STOCK CONSTANT VELOCITY CARBURETORS, EITHER BY ITSELF OR IN CONJUNCTION WITH OTHER SPECIFIC PERFORMANCE PRODUCTS.

WHEN INSTALLED CORRECTLY, ON MOTORCYCLES MEETING IT'S DESIGN PARAMETER YOUR DYNOJET CARBURETION RECALIBRATION KIT WILL GIVE YOU, BROAD RANGE PERFORMANCE GAINS, WITH STOCK DRIVEABILITY.

THE DYNOJET INSTRUCTION SYSTEM

THE DYNOJET INSTRUCTION SYSTEM CONSISTS OF THREE BASIC PARTS.

1) CHART ONE

CHART ONE CONTAINS ALL THE SPECIFIC DATA NECESSARY TO INSTALL THE DYNOJET KIT ON YOUR MOTORCYCLE. CHART ONE LISTS; THE MAKE, MODEL, YEARS, DESIGN PARAMETERS, PARTS AND GIVES ALL THE BASE ADJUSTMENT SETTINGS. IT ALSO DESIGNATES WHAT SECTIONS OF THE INSTALLATION MANUAL ARE TO BE USED FOR EACH SEGMENT OF THE INSTALLATION.

2) INSTALLATION SECTION

THE INSTALLATION PORTION OF THE MANUAL IS MADE UP OF FOUR OR MORE SECTIONS. THESE SECTIONS ARE LABELED ALPHABETICALLY. EACH SECTION PERTAINS TO A SPECIFIC SEGMENT OF THE INSTALLATION PROCEDURE. USING CHART ONE YOU WILL SEE WHICH SECTIONS APPLY TO YOUR PARTICULAR INSTALLATION.

NOTE: YOUR DYNOJET KIT MAY USE ALL SECTIONS OR JUST A FEW OF THEM.

3) ADJUSTMENT AND TESTING SECTION

THE ADJUSTMENT AND TESTING PORTION OF THE MANUAL IS MADE UP OF THREE SECTIONS NUMBERED 1 THRU 3 THESE SECTIONS WILL GIVE PROCEDURES FOR THE INITIAL TESTING OF YOUR DYNOJET KIT, ALONG WITH INFORMATION THAT WILL ALLOW YOU TO TAILOR THE BASE SETTINGS TO YOUR MOTORCYCLES SPECIFIC NEEDS.

DYNOJET RECALIBRATION SYSTEM
INSTALLATION PROCEDURES

THE FOLLOWING INSTRUCTIONS ARE TO BE USED AS A GUIDE FOR A NUMBER OF DIFFERENT MOTORCYCLES WITH CARBURETORS OF THE SAME DESIGN. WITH THIS IN MIND THE ILLUSTRATED INSTRUCTIONS START WITH THE CARBURETORS REMOVED FROM THE MOTORCYCLES.

A GOOD RULE OF THUMB TO FOLLOW HERE IS; IF YOUR MECHANICAL SKILLS ALLOW YOU TO FEEL COMFORTABLE REMOVING THE CARBURETORS FROM THE MOTORCYCLE WITHOUT INSTRUCTIONS, THEN YOU SHOULD HAVE NO TROUBLE INSTALLING THE RECALIBRATION KIT WITH THE HELP OF THE INSTRUCTIONS. IF YOU DO NOT FEEL COMFORTABLE REMOVING THE CARBS, THEN WE SUGGEST YOU HAVE A QUALIFIED MOTORCYCLE MECHANIC INSTALL YOUR KIT.

YOUR MOTORCYCLE SHOULD BE IN GOOD TUNE, IF YOU HAVE CHANGED YOUR TIMING SETTINGS TO SOMETHING OTHER THAN STOCK RESET THEM TO THE FACTORY SETTINGS. NEXT READ THE INSTRUCTIONS CAREFULLY. STUDY CHART ONE AND MARK THE SECTIONS OF THE INSTRUCTION BOOKLET THAT APPLY TO YOUR MODEL.

NOTE: MAKE SURE YOU HAVE THE PROPER DYNOJET KIT FOR YOUR MODEL. MATCH THE PART NUMBERS GIVEN IN CHART ONE TO THE LABELS ON THE PARTS IN YOUR KIT TO MAKE SURE THAT YOU HAVE ALL THE CORRECT PARTS BEFORE YOU START YOUR INSTALLATION.

WARNING WARNING WARNING

DURING THE INSTALLATION OF THIS KIT YOU WILL BE EXPOSED TO GASOLINE AND GASOLINE VAPORS. INSTALL THIS KIT ONLY IN A WELL VENTILATED AREA KEEPING ALL SMOKING MATERIALS, OPEN FLAME, SPARKS OR ANYTHING THAT MAY IGNITE THE GASOLINE OR ITS VAPORS, AWAY FROM YOU AND YOUR WORK AREA.

WARNING WARNING WARNING

SPECIAL TOOLS REQUIRED: ELECTRIC DRILL, SMALL SNAP RING PLIERS (FOR SOME MODELS)

WE SUGGEST THAT YOU BEGIN WITH YOUR MOTORCYCLE COOL, TURN OFF THE FUEL PETCOCK AND REMOVE THE SEAT, SIDE COVERS, AND FUEL TANK. NEXT DRAIN THE FLOAT BOWLS. RELEASE THE CLAMPS HOLDING THE CARBURETORS IN THE INTAKE MANIFOLDS AND IN THE AIR FILTER BOOTS. NOW PUSH THE AIR INTAKE BOOTS INTO THE AIR BOX SO YOU WILL HAVE MORE CLEARANCE TO FACILITATE THE REMOVAL OF THE CARBURETOR ASSEMBLY. PULL THE CARB ASSEMBLY TO THE SIDE AND REMOVE CHOKE AND THROTTLE CABLES.

NOTE: HOLD THE CARB ASSEMBLY LEVEL WHEN YOU REMOVE THEM TO PREVENT THE SPILLAGE OF ANY GASOLINE THAT MAY STILL BE IN THE FLOAT BOWLS. NOW TAKE THE CARBS TO SOMEPLACE SUITABLE TO MAKE SURE ALL THE FUEL IS DRAINED OUT OF THE FLOAT BOWLS.

NOW TAKE THE CARBURETOR ASSEMBLY TO A CLEAN UNCLUTTERED WORK BENCH.

USE CHART ONE ALONG WITH THE INSTALLATION SECTION TO INSTALL THE DYNOJET RECALIBRATION IN YOUR CARBURETORS

DYNOJET RESEARCH

CARBURETOR RECALIBRATION SYSTEM

INSTALLATION SECTION

SECTION A

MAIN JET INSTALLATION

1) POSITION THE CARBURETOR ASSEMBLY ON THE BENCH SO THAT THE FLOAT BOWLS FACE UP. (FIG. ONE)

2) REMOVE THE FLOAT BOWLS.

3) REPLACE THE STOCK MAIN JETS WITH THE MAIN JETS CALLED FOR IN "CHART ONE".

NOTE: BE CAREFUL NOT TO DAMAGE THE FLOATS OR GASKETS DURING THIS PROCEDURE.

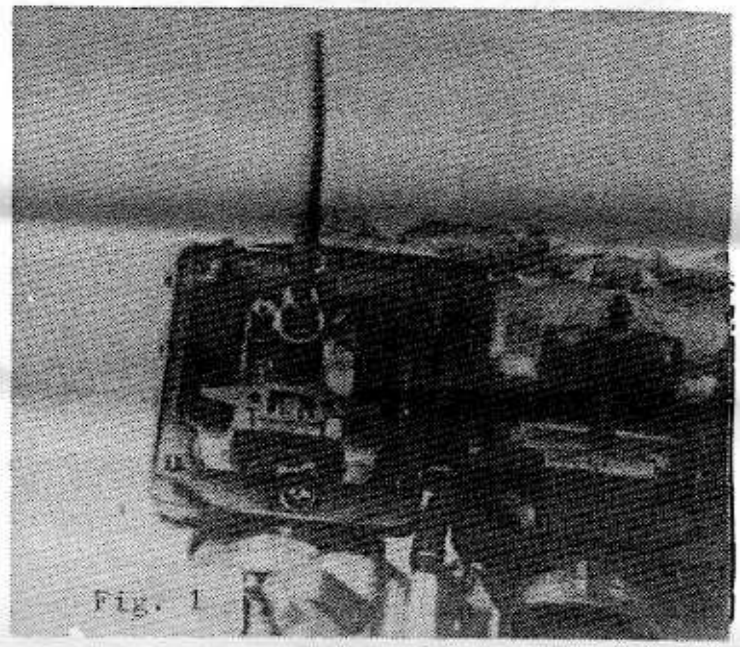


Fig. 1

NOW REFER TO CHART ONE FOR THE NEXT PHASE OF INSTALLATION.

SECTION B

NEEDLE INSTALLATION

1) POSITION THE CARBS ON THE BENCH RIGHT SIDE UP AND REMOVE THE TOP COVERS, ALLOWING ACCESS TO THE SLIDE OPERATING LINKAGE. (FIG. 1)

2) REMOVE THE BOLT HOLDING THE SLIDE ARM ON TO THE THROTTLE SHAFT. (FIG. 1)

3) WITH A PROPERLY SIZED SCREWDRIVER REMOVE THE SCREWS HOLDING THE NEEDLE RETAINING PLATE IN PLACE. (FIG. 2)

4) LIFT THE LINKAGE UP AND BACK SO YOU CAN REMOVE THE CARB SLIDES.(FIG.2)

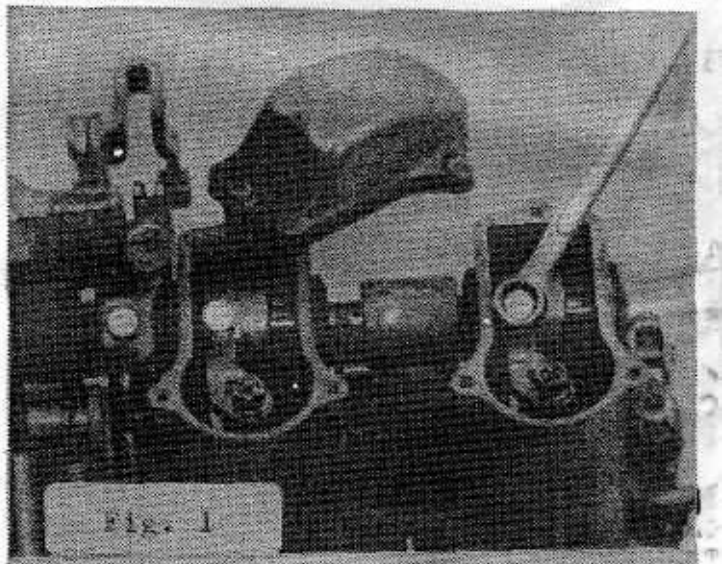
5) REMOVE THE STOCK NEEDLES FROM THE SLIDES PAYING CLOSE ATTENTION TO THE ORDER OF DISASSEMBLY. (FIG.3)

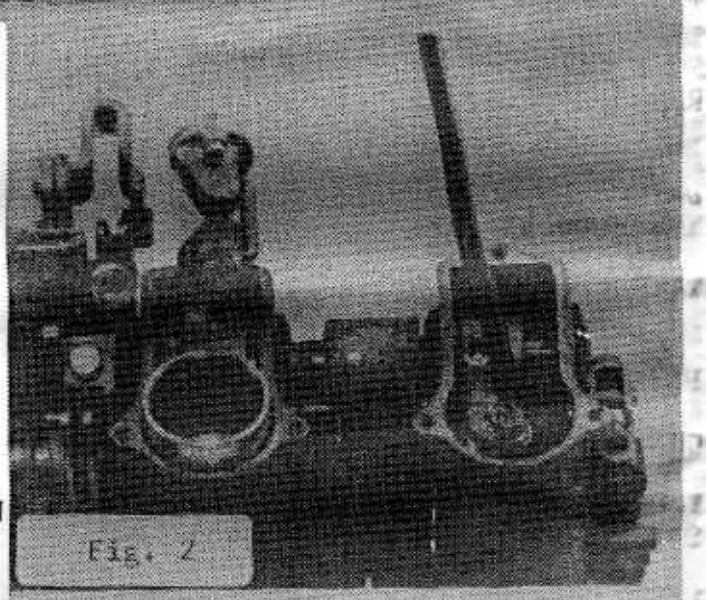
6) INSTALL THE NEEDLES E-CLIPS AND ADJ. WASHERS IN THE CORRECT POSITIONS AS GIVEN IN CHART ONE.

NOTE: THE NEEDLE GROOVES ARE NUMBERED WITH THE TOP GROOVE STARTING AT #1 AND GOING DOWN #2, #3, ECT.

NOTE: INSTALL THE DYNOJET NEEDLES WITH ALL THE SAME PARTS USED WITH THE STOCK NEEDLES WITH THE EXCEPTION OF THE STOCK NEEDLES AND CLIPS, UNLESS OTHERWISE NOTED IN CHART ONE.

7) INSTALL THE SLIDES BACK INTO THE CARB BODIES IN REVERSE ORDER OF DISASSEMBLY.





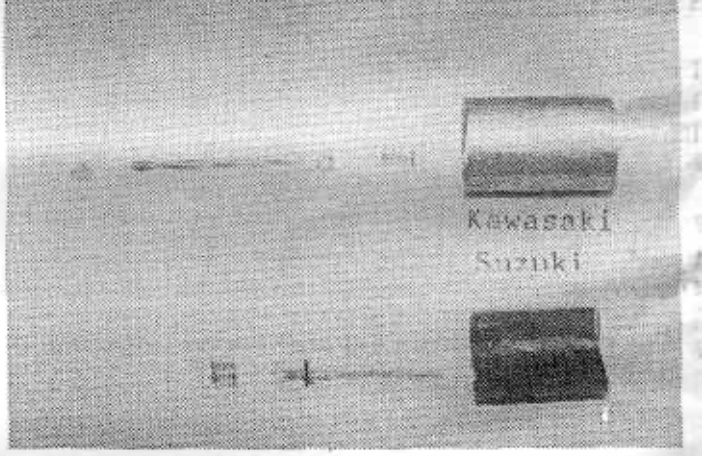


Fig. 3

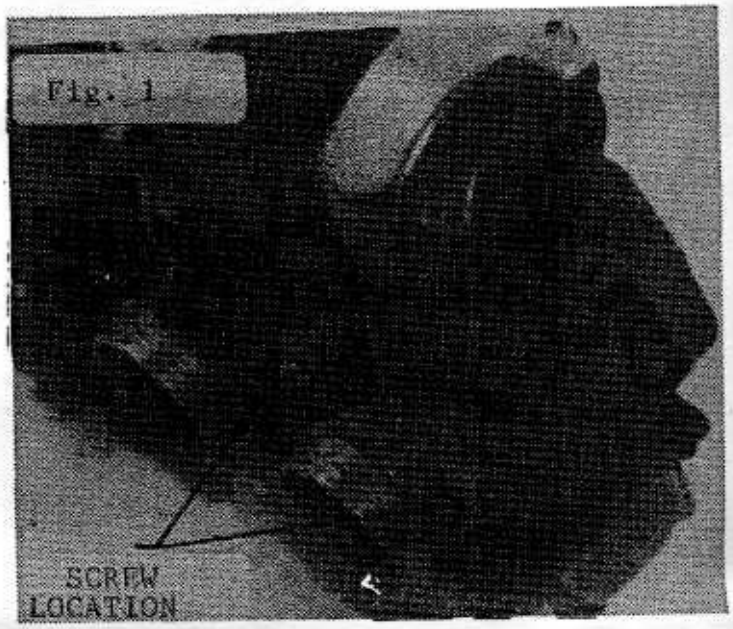
NOW REFER TO CHART ONE FOR THE NEXT PHASE OF INSTALLATION

SECTION C

ADJUSTING AIR MIXTURE SCREWS

NOTE: MOST 1978 KZ1000 LTD'S DO NOT HAVE AIR MIXTURE SCREWS BUT HAVE FUEL MIXTURE SCREWS WHICH ARE LOCATED ON THE BOTTOM SIDE OF THE CARBS IN FRONT OF THE FLOAT BOWLS. IF YOU HAVE FUEL MIXTURE SCREWS START WITH A BASE SETTING 3/4 TURNS OUT FROM THE STOCK SETTING. AND DISREGARD STEPS 1 THRU 5.

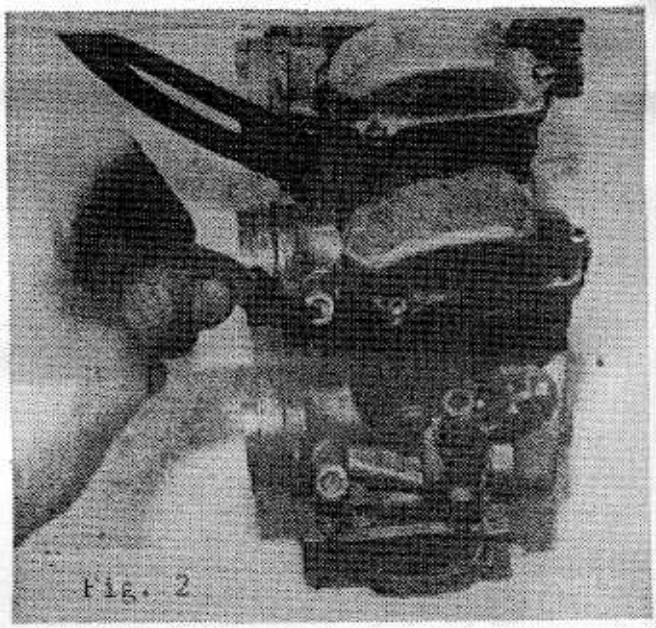
1) THE LOCATION OF THE PLUGS COVERING THE AIR MIXTURE SCREWS IS SHOWN IN FIG. 1.



2) WITH A SMALL CENTER PUNCH LIGHTLY CENTER PUNCH EACH OF THE PLUGS BEFORE DRILLING.

3) BE CAREFUL
CAREFULLY DRILL A HOLE THRU EACH OF THE MIXTURE SCREW PLUGS. **CARE MUST BE TAKEN NOT TO DRILL INTO THE MIXTURE SCREWS WHICH ARE BENEATH THE PLUGS.** RUN THE DRILL FAST AND DRILL WITH VERY LIGHT PRESSURE, TAKE PLENTY OF TIME. ALWAYS BE READY TO PULL BACK ON THE DRILL THE INSTANT THE DRILL BREAKS THRU THE PLUG.

4) TAKE THE SHEET METAL SCREW SUPPLIED IN THE KIT AND SCREW IT INTO THE HOLE IN THE PLUG UNTIL IT IS SNUG. NOW TAKE A PLIERS AND PULL THE SCREW STRAIGHT OUT AND THE PLUG SHOULD COME WITH IT. COMPLETE THIS STEP ON ALL FOUR CARBS.



5) TURN THE AIR MIXTURE SCREWS TO THE SETTINGS GIVEN IN CHART ONE.

CAUTION

THE AIR MIXTURE SCREWS ARE EASILY DAMAGED BY CARELESS ADJUSTMENT. IF YOU TURN THE SCREWS IN AND DO NOT STOP WHEN IT SEATS LIGHTLY YOU CAN BREAK THE METERING TIP OFF. SOMETIMES THE SCREWS MAY BE TIGHT IN THE THREADS AND IF YOU ARE CARELESS BY THE TIME YOU FIND IT OUT THE SCREW SLOT IS RUBBED OFF.

THE BEST PROCEDURE IS TO GET A SCREW DRIVER WITH GOOD SHARP EDGES THAT FIT THE SLOT CLOSELY. THEN TURN THE SCREWS IN FIRST ABOUT 1/2 OF A TURN. NOW BLOW OUT ANY METAL SHAVINGS OR CRUD. NEXT PUT IN A FEW DROPS OF PENETRATING OR LIGHT OIL. THEN TURN THE SCREWS OUT A COUPLE OF TURNS AND BACK IN, TO MAKE SURE THEY MOVE FREE. NOW TURN THE SCREWS IN UNTIL THEY SEAT • LIGHTLY • THEN TURN THEM OUT THE NUMBER OF TURNS GIVEN AS THE BASE SETTING. SEE CHART ONE

REFER TO CHART ONE FOR THE NEXT PHASE OF INSTALLATION.

SECTION D

SPECIAL ADDITIONAL INSTRUCTIONS

NOW REFER TO CHART ONE FOR THE NEXT PHASE OF INSTALLATION

SECTION E

FINAL ASSEMBLY

1) WITH THE CARBURETORS FULLY ASSEMBLED ON THE BENCH TAKE A MINUTE TO DOUBLE CHECK YOUR WORK. CHECK FOR MISSING SCREWS, SLIDE ACTION, THROTTLE PLATE FUNCTION, IN GENERAL ANYTHING OUT OF THE ORDINARY.

2) IF YOUR DYNOJET JET RECALIBRATION SYSTEM IS DESIGNED FOR USE WITH K & N INDIVIDUAL FILTERS, YOU SHOULD REMOVE THE STOCK AIR BOX FROM THE MOTORCYCLE BEFORE INSTALLING THE CARBURETOR ASSEMBLY. NOW INSTALL THE CARBURETOR ASSEMBLY IN REVERSE ORDER OF ITS DISASSEMBLY.

NOTE: KAWASAKI MODELS FITTED WITH INDIVIDUAL AIR FILTERS ONLY

THE LARGE HOSE THAT GOES INTO THE TOP SIDE OF THE AIR BOX IS FOR THE AIR INJECTION SYSTEM. WE SUGGEST THAT IT BE SEALED, OR ROUTED IN A LOOP FROM ONE SIDE TO THE OTHER. IF YOU WISH TO KEEP A FUNCTIONAL AIR INJECTION SYSTEM, YOU MAY DO SO BY ATTACHING A K&N CRANKCASE BREATHER PART NUMBER 62-1030 TO THE END OF THE HOSE THAT WENT INTO THE AIR BOX. A FUNCTIONAL INJECTION SYSTEM WILL PRODUCE ADDITIONAL NOISE THAT YOU MAY FIND ANNOYING.

3) INSTALL YOUR SPECIFIC STYLE OF K&N FILTER ACCORDING TO THE MANUFACTURES INSTRUCTIONS.

4) REPLACE THE FUEL TANK, SIDE COVERS , AND SEAT.

WARNING CAUTION WARNING

DOUBLE CHECK ALL * VACUUM LINES* FUEL LINES * THROTTLE CABLES * CHOKE CABLES * CLAMPS * MOUNTING BOLTS * HOSE AND WIRE ROUTING * AND ANY OTHER PART THAT HAS BEEN REMOVED OR ADJUSTED DURING INSTALLATION

WARNING CAUTION WARNING

5) TURN THE FUEL VALVE ON AND CHECK FOR LEAKS WHILE THE FLOAT BOWLS ARE FILLING.

6) START THE ENGINE, TURN THE HANDLE BARS FROM SIDE TO SIDE TO INSURE THAT THE CABLES ARE NOT BINDING AND CAUSE THE ENGINE TO RACE. BLIP THE THROTTLE A COUPLE OF TIMES TO INSURE THE LINKAGE IS NOT STICKING.

WARNING WARNING WARNING

DO NOT DRIVE THE MOTORCYCLE IF STEP 6 DOES NOT CHECK OUT PERFECTLY

WARNING WARNING WARNING

7) SET THE IDLE TO FACTORY SPECIFICATIONS

NOW GO TO; ADJUSTMENT AND TESTING SECTION ONE.

DYNOJET RESEARCH

CARBURETOR RECALIBRATION SYSTEM

ADJUSTMENT & TESTING SECTION

SECTION ONE

AIR MIXTURE SCREW ADJUSTMENT PROCEDURE

THE AIR MIXTURE SCREWS CONTROL AIR. THEY ARE USED IN CONJUNCTION WITH ALL OF THE CARBS OTHER JETS TO ALLOW A MEANS TO COMPENSATE FOR DIFFERENCES IN SEASONAL TEMPERATURE, AND GEOGRAPHICAL LOCATIONS. TURNING THE SCREWS OUT INCREASES AIR GIVING LEANER MIXTURES AT IDLE AND IN THE CRUISING MODE. THIS CAN BE USEFUL WHEN OPERATING IN HOT WEATHER OR HIGH ALTITUDES. TURNING THE SCREWS IN RESTRICTS AIR FLOW GIVING RICHER MIXTURES WHICH CAN IMPROVE COLD WEATHER OPERATION. ADJUSTING THE MIXTURE SCREWS AT REGULAR INTERVALS WILL HELP MAINTAIN A HIGH DEGREE OF DRIVEABILITY.

1) WARM THE ENGINE UP TO NORMAL OPERATING TEMPERATURE.

NOTE: IN ALMOST ALL CASES WHEN THE DYNOJET SYSTEM IS INSTALLED THE ENGINE WILL IDLE AT THE SAME SPEED OR FASTER THAN IT DID STOCK. IF THE ENGINE FAILS TO IDLE THE PROBLEM WILL BE EITHER LACK OF FUEL,OR DEBRIS IN THE PILOT SYSTEM OR CARBURETOR SYNC. MAKE SURE THE ENGINE WILL IDLE BEFORE GOING ANY FARTHER WITH THE ADJUSTMENT PROCEDURE.

2) ADJUST THE MIXTURE SCREWS WITHIN 1-1/2 TURNS EITHER WAY OF THE BASE SETTING TO ATTAIN THE SMOOTHEST IDLE. (WHEN USING AN EXHAUST GAS ANALYZER SET MIXTURE SCREWS AT 2 - 3 % CO.) THE HONDA IDLE DROP METHOD OF MIXTURE SCREW ADJUSTMENT MAY ALSO BE USED.

3) RESET IDLE TO FACTORY SPECIFICATIONS.

4) AT THIS TIME BLIP THE THROTTLE TO REV THE ENGINE UP QUICKLY TO 5000 OR 6000 RPM, WHILE IN NEUTRAL. THE ENGINE SHOULD BE RESPONSIVE TO THE THROTTLE. IF THE ENGINE FAILS TO RESPOND NORMALLY, CHECK TO SEE THAT THE ENGINE IS GETTING SUFFICIENT FUEL.

NOTE: IF THERE IS SUFFICIENT FUEL, CHECK THE ORDER IN WHICH YOU INSTALLED THE DYNOJET NEEDLES AND THE E-CLIPS AGAINST THE INFORMATION GIVEN IN CHART ONE, AND SECTION B OF THE INSTALLATION MANUAL. IF THE PARTS ARE INSTALLED CORRECTLY MOVE THE E-CLIP TO THE NEXT RICHER GROOVE POSITION ON THE NEEDLE.(ie BASE SETTING GROOVE 3 IS MADE ONE GROOVE RICHER GOING TO GROOVE 4) REPEAT STEPS 2 THRU 4 UNTIL THE ENGINE RESPONDS TO THROTTLE PROPERLY.

NOW PROCEED TO SECTION TWO INITIAL TEST DRIVE

SECTION TWO

INITIAL TEST DRIVE PAGE ONE

THE INITIAL TEST DRIVE CONSIST OF THREE SPECIFIC TESTS. DO TO THE COMPLEXED NATURE OF THE MOTORCYCLE CARBURETORS, WE ASK THAT YOU PERFORM THE TESTS IN THE EXACT MANNER AS THEY ARE GIVEN IN THIS SECTION. THIS IS VERY IMPORTANT IF YOU SHOULD HAVE TROUBLE REQUIRING OUTSIDE TECHNICAL ASSISTANCE. YOU WILL BE ASKED SPECIFICALLY FOR THE RESULTS OF THE TESTS IN SECTION TWO.

WARNING WARNING WARNING

FUNCTION TEST

WITH THE ENGINE RUNNING, TURN THE HANDLE BARS FROM SIDE TO SIDE TO INSURE THAT THE CABLES ARE NOT BINDING AND CAUSE THE ENGINE TO RACE. BLIP THE THROTTLE A COUPLE OF TIMES TO INSURE THE LINKAGE IS NOT STICKING. ALSO CHECK THE FUNCTION OF THE CLUTCH AND KILL SWITCH TO INSURE THAT CABLES OR WIRES HAVE NOT BECOME IMPROPERLY ROUTED OR DAMAGED.

* UNDER NO CIRCUMSTANCE SHOULD YOUR MOTORCYCLE BE DRIVEN IF THE PRECEDING * * * * FUNCTION CHECKS DID NOT CHECK OUT PERFECTLY * *

WARNING WARNING WARNING

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TEST ONE: LEAN CRUISE TEST

1) TEST DRIVE THE MOTORCYCLE IN FIRST GEAR IN THE FOLLOWING MANNER: SLOWLY ACCELERATE THE MACHINE FROM IDLE TO 2000 RPM. MAINTAIN THAT SPEED FOR AT LEAST 15 SECONDS. THEN INCREASE THE SPEED TO 3000 RPM, AND HOLD IT THERE FOR ANOTHER 15 SECONDS. CONTINUE ACCELERATING AND HOLDING STEADY AT EVERY THOUSAND RPM UNTIL YOU REACH 50% OF THE FULL RPM RANGE. (ie. FOR A MOTORCYCLE WITH A 10,000 RPM RED LINE YOU RUN THE TESTS TO 5000 RPM) TURNING THE CRUISE PORTION OF THESE TESTS PAY CLOSE ATTENTION TO THE ENGINES POWER DELIVERY.

2) IF THERE IS A SLIGHT SURGING OR HESITATION, DURING THE CRUISE PORTIONS. THIS IS AN INDICATION THAT THE ENGINE IS RUNNING SLIGHTLY LEAN WHEN THE CARBURETORS ARE FUNCTIONING IN THEIR LEANEST OPERATING MODE. TO CORRECT THIS TURN ALL THE AIR MIXTURE SCREWS IN 1/4 TO 1/2 TURN, FROM THE POSITION ARRIVED AT DURING THE FUEL MIXTURE SCREW ADJUSTING PROCEDURE. NOW REPEAT THE LEAN CRUISE TEST AGAIN UNTIL THE SURGING IS GONE.

NOTE: IF DURING STEPS 1 & 2 YOU FIND THAT THE FUEL MIXTURE SCREWS ARE TURNED IN 1 TO 2 TURNS PAST THE SETTINGS ARRIVED AT IN THE FUEL MIXTURE SCREW ADJUSTMENT PROCEDURES, WITHOUT HAVING MUCH AFFECT ON THE SURGE, OR IF IT STOPS THE SURGE BUT CAUSES THE ENGINE TO IDLE POORLY, THE LEAN PROBLEM MAY BE OUT OF THE RANGE OF THE MIXTURE SCREWS AND WILL PROBABLY REQUIRE A NEEDLE ADJUSTMENT. IN THIS CASE RETURN THE FUEL MIXTURE SCREWS BACK TO THE SETTINGS ARRIVED AT DURING THE FUEL MIXTURE SCREW ADJUSTMENT PROCEDURES AND GO TO TEST TWO "MODERATE ACCELERATION LEAN TEST".

CONTINUED ON THE NEXT PAGE

INITIAL TEST DRIVE PAGE TWO

TEST TWO: MODERATE ACCELERATION LEAN TEST

1) WHILE DRIVING THE MOTORCYCLE IN FIRST GEAR AT 2000 RPM, ACCELERATE AT NO LESS THAN 1/2 THROTTLE AND NO MORE THAN 3/4 THROTTLE TO 50% OF YOUR RPM BAND (AS EXPLAINED IN TEST ONE) **NOTE:** DO NOT TEST ANY HIGHER THAN THE 50% MARK. ONCE YOU REACH THIS DEACCELERATE BACK DOWN TO 2000 RPM. REPEAT THIS PROCESS ABOUT 5 TIMES TO MAKE SURE THAT ANY EXCESS OIL FROM THE FRESHLY INSTALLED K&N FILTERS IS NOT EFFECTING THE CARBURETION. IF AFTER THE FIFTH RUN YOU NOTICE ANY TYPE OF CARBURETION PROBLEM. THE MOST PROBABLE CAUSE UNDER THESE TEST CONDITIONS IS LEANESS. TO CORRECT THIS PROBLEM MOVE THE E-CLIPS ON THE NEEDLES TO THE NEXT RICHER POSITION. IF THE CARBURETION PROBLEMS ARE VERY PRONOUNCED MOVE THE E-CLIP ONE FULL GROOVE. (ie. IF ON GROOVE 3 THEN MOVE TO GROOVE 4). IF THE PROBLEMS ARE MORE SUBTLE THEN MAKE A 1/2 GROOVE ADJUSTMENT.

NOTE: BEFORE MAKING ANY ADJUSTMENT TO THE E-CLIP SETTINGS MAKE SURE YOU CHECK THE ORDER IN WHICH YOU INSTALLED THE NEEDLES AND ANY OF THE REQUIRED SPRINGS, WASHERS, OR SPACERS, AGAINST THE INSTALLATION INSTRUCTIONS. IF AN ERROR IS NOTICED IN THE ASSEMBLY ORDER THEN CORRECT IT AND REPEAT THE SECTION TWO TESTS FROM THE BEGINNING.

NOTE: BECAUSE THE AIR MIXTURE SCREWS CONTROL AIR BLEED TO ALL FUEL CIRCUITS, AIR MIXTURE SCREW ADJUSTMENT SHOULD BE DONE AGAIN AT EACH DIFFERENT NEEDLE SETTING.

NOTE: IN THE PACKAGE WITH THE DYNOJET NEEDLES THERE ARE ADJUSTING WASHERS. THESE WASHERS ARE TO BE USED TO GET A 1/2 GROOVE ADJUSTMENT OUT OF THE NEEDLES BY SWITCHING THE WASHERS TO EITHER THE TOP OR THE BOTTOM SIDE OF ANY GIVEN E-CLIP POSITION. IN MOST OF THE DYNOJET SYSTEMS THE BASE SETTINGS GIVEN WILL PLACE THE ADJUSTING WASHERS IN THE STORAGE POSITION. MOST OF THE SUZUKI MODELS POSITION THE NEEDLES FROM THE TOP SIDE OF THE E-CLIP IN WHICH CASE INSTALLING THE WASHER ABOVE THE E-CLIP PROVIDES THE HALF STEP ADJUSTMENT WHICH WOULD BE LEANER. MOST OTHER MODELS POSITION THE NEEDLE FROM THE BOTTOM SIDE OF THE E-CLIP IN WHICH CASE INSTALLING THE WASHER BELOW THE E-CLIP PROVIDES THE HALF STEP ADJUSTMENT WHICH WOULD BE RICHER.

CONTINUED ON THE NEXT PAGE

SECTION TWO

INITIAL TEST DRIVE PAGE THREE

TEST THREE: ACCELERATION MODE RICH TEST

1) WHILE DRIVING THE MACHINE AT 2000 RPM IN FIRST GEAR ACCELERATE AT FULL THROTTLE TO RED LINE. DO THIS TWO OR THREE TIMES. IF YOU HAVE CARBURETION PROBLEMS IN THE MID TO UPPER PORTIONS OF THE REV. RANGE, UNDER THESE TEST CONDITIONS THE MOST PROBABLE CAUSE IS A RICH MIXTURE. THIS ASSUMPTION WOULD BE FURTHER STRENGTHENED, IF YOU WENT THROUGH TESTS ONE AND TWO WITH OUT HAVING TO MAKE ANY ADJUSTMENTS. TO CORRECT THIS PROBLEM YOU SHOULD MOVE THE E-CLIP TO THE NEXT LEANER POSITION ON THE NEEDLES.(ie. ON GROOVE 3 THAN MOVE E-CLIP TO GROOVE 2)

2) REPEAT BOTH TEST TWO AND TEST THREE UNTIL YOU HAVE A SETTING THAT PASSES BOTH TESTS.

3) DOUBLE CHECK THE RESULTS OF TEST THREE BY DRIVING THE MACHINE IN THE SAME MANNER AS STEP ONE, BUT IN SECOND GEAR.

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AT THIS POINT YOUR MACHINE SHOULD PASS TESTS ONE THRU THREE.

IF YOU WISH YOU MAY CALL YOUR INSTALLATION COMPLETE.

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NOTE: AN EXTRA MEASURE OF PERFORMANCE MAY BE OBTAINED BY ADJUSTMENTS FOUND IN SECTION THREE.

TEST THREE FAILURE

IF AT THIS POINT YOUR MACHINE PASSES TEST ONE AND TWO BUT CAN NOT PASS TEST THREE, YOUR MACHINE MAY BE RUNNING AT LESS THEN DESIGNED EFFICIENCY. SOME PROBABLE CAUSES ARE GIVEN IN THE MAIN JET PORTION OF SECTION THREE, ON PAGE TWO. IF YOU CAN NOT CORRECT THE EFFICIENCY LOSS YOU MAY TRY TO DECREASE THE FUEL DELIVERY RATE TO MATCH THE MACHINES PRESENT STATE OF TUNE.

TO DO THIS REDUCE THE MAIN JET SIZE BY REPLACING THE JETS SUPPLIED IN THE KIT WITH JETS WHICH ARE 5 JET SIZES SMALLER (ie.REPLACE DK140 OR DM140 JETS WITH THEIR RESPECTIVE 135 KEIHIN OR MIKUNI JETS) THEN RE-PEAT TEST TWO AND TEST THREE.

NOTE: IF YOUR MACHINE STILL WILL NOT PASS TESTS ONE THRU THREE CALL FOR TECHNICAL ASSISTANCE.

TWO.7-3

SECTION THREE

ADJUSTING FOR MAXIMUM PERFORMANCE PAGE ONE

IN SECTION TWO YOU DID THREE TESTS. TESTS ONE AND TWO CHECKED TO MAKE SURE YOUR MACHINE DID NOT RUN TOO LEAN. TEST THREE CHECKED TO MAKE SURE YOUR MACHINE DIDN'T RUN TOO RICH. TYPICALLY THE JAPANESE MOTORCYCLES PRODUCED IN RECENT YEARS CAN FUNCTION WITH MINOR MODIFICATIONS WITHOUT ANY NOTICEABLE FLAWS AT AIR/FUEL RATIOS RANGING FROM 14:1 TO 11:1. ADJUSTMENTS IN CARBURETOR JETTING THAT FALL AT EITHER END OF THIS RANGE WE REFER TO AS FRINGE JETTING. FRINGE JETTING IS RESPONSIBLE FOR THE COMMON MYTH THAT PERFORMANCE JETTING MUST CONSTANTLY BE ALTERED FOR NORMAL TEMPERATURE AND/OR DIFFERENCES IN ALTITUDE. IF A MACHINE IS OPERATING IN THE RICH FRINGE JETTING RANGE, LETS SAY A AIR/FUEL RATIO ABOUT 11:1 AT SEA LEVEL AT 70 DEGREES, IT IS LIKELY THAT A DIFFERENCE OF 2500 FEET ELEVATION AND +20 DEGREES COULD CHANGE THE AIR/FUEL RATIO TO PERHAPS 10.5:1 THUS CAUSING SLIGHT CARBURETION PROBLEMS DURING HARD ACCELERATION. THE SAME THING CAN HAPPEN ON THE OTHER END OF THE SCALE ALTHOUGH IT IS NOT AS COMMON.

YOU CAN USE THE FOLLOWING PROCEDURE TO MAKE SURE YOUR NOT JETTED IN THE RICH FRINGE AREA.

NOTE: IF YOU HAD TO ADJUST THE NEEDLE POSITION THE FIRST TIME YOU DID TEST TWO, OF THE INITIAL TEST DRIVE. AND IF YOU ADJUSTED THE E-CLIP IN 1/2 STEP INTERVALS AS INSTRUCTED, YOU ALREADY MADE SURE THAT YOUR MACHINE IS NOT JETTED IN THE RICH FRINGE AREA. THUS YOU WILL NOT NEED TO PERFORM THE FOLLOWING PROCEDURE.

NEEDLE ADJUSTMENTS

1) MAKE SURE YOU HAVE ADJUSTED YOUR MACHINE SO IT PASSES TEST 1,2,AND 3.

2) ADJUST THE E-CLIP AND THE ADJUSTING WASHERS ON THE NEEDLES TO THE NEXT 1/2 STEP LEANER POSITION.

NOTE: ON MOST MODELS THE 1/2 STEP LEANER POSITION IS ARRIVED AT BY MOVING THE E-CLIP TO THE NEXT LEANER GROOVE POSITION, AND THEN PLACING AN ADJUSTING WASHER BENEATH EACH E-CLIP BEFORE ASSEMBLING.

NOTE: ON SUZUKI MODELS THE 1/2 STEP LEANER POSITION IS ATTAINED SIMPLY BY PLACING AN ADJUSTING WASHER ABOVE THE E-CLIP ON EACH NEEDLE.

3) ONCE THIS ADJUSTMENT IS MADE, REPEAT TEST ONE, AND TEST TWO OF THE INITIAL TEST DRIVE.

4) IF THIS NEW NEEDLE SETTING PASSES TEST TWO WITHOUT ANY ADJUSTMENT THEN REPEAT STEPS 2 AND 3 OF THIS PROCEDURE UNTIL YOU FAIL TO PASS TEST TWO, OF THE INITIAL TEST DRIVE.

5) ONCE YOU HAVE REACHED A SETTING THAT WILL NOT PASS TEST TWO. MOVE THE NEEDLE BACK 1/2 STEP TO THE POSITION THAT PREVIOUSLY PASSED TEST TWO, OF THE INITIAL TEST DRIVE.

CONTINUED ON NEXT PAGE

SECTION THREE

ADJUSTING FOR MAXIMUM PERFORMANCE PAGE TWO

MAIN JET

IN THE DYNOJET SYSTEM OF CARBURETOR RECALIBRATION THE MAIN JET RARELY NEEDS TO BE CHANGED WHEN THE SYSTEM IS INSTALLED ON MOTORCYCLES MEETING THE DESIGN PARAMETERS FOR WHICH IT WAS INTENDED.

AFTER THE DYNOJET SYSTEM IS INSTALLED AND ADJUSTED CORRECTLY, MOST CARBURETION PROBLEMS THAT SEEM TO BE CAUSED BY THE MAIN JETS BEING TOO RICH, ARE IN MANY CASES JUST AN EFFECT OF SOME OTHER MECHANICAL CONDITION CAUSING THE ENGINE TO RUN AT LOWER THAN STOCK EFFICIENCY. POOR OVERALL STATE OF TUNE, POORLY DESIGNED AFTERMARKET EXHAUSTS, DEFECTIVE EXHAUST CAUSED BY HIGH MILEAGE, PLUGGED OR NON-EXISTENT BAFFLING, DENTED PIPES OR MUFFLERS, DIRTY OR OTHERWISE DEFECTIVE AIR FILTERS, OR THE USE OF AIR FILTERS OR EXHAUST SYSTEMS OTHER THAN THOSE CALLED FOR IN CHART ONE.

UNDER THESE CIRCUMSTANCES IT IS BETTER TO FIX THE CAUSE THAN TO ADJUST TO THE EFFECTS.

MAIN JET ADJUSTMENT

1) A: IF YOUR MACHINE PASSED ALL TESTS IN SECTION TWO, INITIAL TEST DRIVE. AND YOU MET THE NO TEST REQUIREMENT IN SECTION THREE.
   B: YOU PASSED THE NEEDLE ADJUSTMENT TESTS IN SECTION THREE, BUT HAVE A SLIGHT LOSS OF PEAK POWER IN THE UPPER GEARS.
   C: YOU HAVE A WHITE EXHAUST PIPE AFTER PROLONGED HIGH SPEED USE.

   REPLACE THE MAIN JETS SUPPLIED IN YOUR KIT WITH JETS 2.5 TO 5 JET SIZES BIGGER. (ie. 160 JETS ARE REPLACED WITH 162.5 OR 165 JETS)

NOTE: THE BEST WAY TO CHECK THE MAIN JETS PERFORMANCE IS TO LOOK AT THE COLOR OF THE END OF THE EXHAUST PIPE. AFTER PROLONGED FULL POWER USE. CHECKING THE MAIN IN THIS MANNER WILL USUALLY BE MORE EFFECTIVE THEN A PLUG CHECK. DUE TO THE INCREASED EFFICIENCY IN THE CURRENT PRODUCTION MOTORCYCLES, A DIFFERENCE IN CARBURETION THAT SHOWS UP AS A WHITE TO BLACK COLOR CHANGE IN THE EXHAUST PIPE, WOULD BE SUBSTANTIALY LESS NOTICEABLE IF YOU WOULD EXAMINE THE PLUGS.

NOTE: THE PROPER COLOR EXHAUST FOR PEAK RACING PERFORMANCE IS: LIGHT TAN TO VERY LIGHT TAN.