

TO OUR CUSTOMERS

OUR PRODUCT PHILOSOPHY IS SIMPLE: PLACE QUALITY ABOVE ALL OTHER CONSIDERATIONS. VKE COMPONENTS AND RACE ENGINES REFLECT THIS POLICY IN THEIR EASY INSTALLATION, "IN TOLERANCE" DIMENSIONS AND LONG SERVICE LIFE.

MANY OF THE PERFORMANCE PRODUCTS LISTED IN THIS CATALOG HAVE BEEN DEVELOPED TO ENHANCE RELIABILITY RATHER THAN INCREASE OUTPUT. OFTEN THEY ARE ESSENTIAL IN MODIFIED ENGINES. PLEASE DO NOT HESITATE TO ASK IF A PARTICULAR CHANGE OR MODIFICATION YOU WANT TO MAKE SHOULD INVOLVE OTHER, SUPPORTIVE PROCEDURES OR COMPONENT CHANGE OUTS TO MAXIMIZE SERVICE LIFE.

COMPONENTS FOR THE HM100 TECUMSEH ENGINE

WE DO NOT OFFER COMPONENTS SPECIFICALLY FOR THIS ENGINE. ALTHOUGH IT APPEARS SIMILAR TO THE MOTORSPORTS STAR ENGINE, THE INTERNAL COMPONENTS ARE DIFFERENT AND WILL NOT INTERCHANGE. HOWEVER, SOME PERFORMANCE STEPS CAN BE TAKEN. PLEASE CALL BEFORE PLACING AN ORDER.

COMPONENTS FOR THE VM170 & VM220 TECUMSEH ENGINE

WE CAN HELP LAWN MOWER RACERS MAKE COMPETITIVE ENGINES. WE OFFER RESLEEVEING, PORTING AND OVERSIZE VALVE INSTALLATION SERVICES AS WELL AS PROVEN PERFORMANCE COMPONENTS. PLEASE INQUIRE BEFORE ORDERING FROM THIS CATALOG.

COMPONENTS AND SERVICES FOR THE HONDA GX390 & CLONES

WE ARE NOW OFFERING PARTS AND SERVICE FOR THE POPULAR 390 HONDA AND CLONES SUCH AS THE LCT AND POWER MAXX OFFERINGS. OUR LOW DRAG TWO RING DESIGN JE FORGED PISTONS ARE STOCKED THRU 91MM AND THRU 95MM CAN BE SPECIAL ORDERED.

ORDERS

CALL VKE MOTORSPORTS AT (303) 371-5427 OR FAX TO (303) 367-0441

EMAIL: vkart@qwestoffice.net

WE WILL HOLD A BACKORDER FOR 30 DAYS. AFTER THAT TIME, ALL UNFILLED ITEMS WILL BE CANCELED.

PAYMENTS & SHIPPING

WE SHIP BY UPS AND USPS PRIORITY MAIL DAILY AND ACCEPT VISA, MASTERCARD AND DISCOVER CARDS. COD ORDERS ARE ALSO ACCEPTED; HOWEVER, IF AN ORDER IS REFUSED, FUTURE ORDERS PLACED BY THIS ACCOUNT WILL BE FILLED ON A CASH IN ADVANCE BASIS.

SHIP RETURNS & SERVICE WORK PREPAID TO: VKE MOTORSPORTS 1070 S BUCHANAN ST AURORA, CO 80018

RETURNS & MINIMUM ORDERS

RETURNS MUST BE UNUSED, IN NEW CONDITION, IN ORIGINAL PACKAGING, PREAPPROVED, WITHIN 10 DAYS AND WILL BE SUBJECT TO A 20% RESTOCKING FEE. A \$5.00 FEE WILL BE ADDED TO ANY ORDER LESS THAN \$20.00.

WARRANTIES

DUE TO INTENDED USAGE OF PRODUCTS OFFERED, ALL PRODUCTS ARE SOLD ON AN "AS IS" BASIS, AND NO WARRANTIES OF ANY KIND, WHETHER WRITTEN OR ORAL, ARE MADE BY VKE MOTORSPORTS, ITS AGENTS OR EMPLOYEES. ALL IMPLIED WARRANTIES, INCLUDING THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS, ARE EXPRESSLY EXCLUDED, AND THE BUYER BEARS THE ENTIRE RISK AS TO QUALITY, PERFORMANCE AND USE OF THESE PRODUCTS. VKE MOTORSPORTS RESERVES THE RIGHT TO CHANGE SPECIFICATIONS AND PRICES, OR DISCONTINUE PARTS WITHOUT NOTICE.



CONNECTING RODS, BEARINGS AND BOLTS

QUALITY RODS MADE FROM 7075-T6 ALUMINUM WITH CARE AND ATTENTION TO DETAIL. THESE RODS HAVE REPLACEABLE BEARING INSERTS AVAILABLE IN STANDARD AND .3MM (.012") UNDERSIZE. THE PROFILE IS DONE IN A UNIQUE RIBBED FINISH THAT IS DESIGNED TO PREVENT STRESS RISERS. THE 12 POINT BOLTS ARE OVERSIZED AT 5/16" DIAMETER, RATED AT 170,000 PSI TENSILE STRENGTH AND ARE 50% STRONGER THAN SIMILAR 1/4" FASTENERS. RODS ARE CURRENTLY AVAILABLE IN 4.350" AND 4.450" LENGTHS. BOTH CAN BE USED IN STOCK 2.532" STROKE STARS. USE THE .770" COMPRESSION HEIGHT PISTONS WITH THE 4.350" VSR40 ROD AND USE THE .670" COMPRESSION HEIGHT PISTONS WITH THE 4.450" VSR50 ROD. THE VSR40 ROD AND .670" COMPRESSION HEIGHT PISTONS MUST BE USED WITH OUR 2.732" STROKE CRANKSHAFTS.

HONDA GX390 AND BIG CLONES

HONDA GX390 AND SIMILAR LARGE CLONE ENGINES CAN GAIN DISPLACEMENT BY USING OUR 4.350" ROD AND OFFSET GRINDING THE CRANKSHAFT. WE HAVE SUCCESSFULLY TESTED THIS IN THE 66MM STROKE POWER MAXX 419 ENGINE. IN THIS EXAMPLE, STROKE IS INCREASED .200" (5MM) AND MATCHED TO OUR OHVSP SERIES PISTON. THIS IS A COST EFFECTIVE WAY TO MAKE A REAL PERFORMANCE GAIN. CALL FOR MORE INFO.

P/N	DESCRIPTION	PRICE
VSR40	4.350" ROD	\$125.00
VSR40ND	4.350" ROD – NO DIPPER	\$130.00
VSR50	4.450" ROD	\$125.00
VSRBK	STD ROD BOLT KIT	\$8.95
VSRB	STANDARD BEARING SET	\$16.95
VSRB3	.3MM UNDERSIZE BEARING SET	\$18.95
ARC6272	4.410" HONDA 340/390 ROD	\$149.95

TECUMSEH TAPPET BOX COVER



THE VKE BILLET TAPPET BOX COVER IS MADE FROM 3/16" THICK ALUMINUM, COMES WITH TWO TAPPED VENT HOLES, TWO PLATED STRAIGHT FITTINGS, TWO GASKETS AND MOUNTING HARDWARE. FITS ALL 5HP AND UP MODELS.
P/N VTTBC \$14.60

TECUMSEH STAR PISTONS

THIS JE FORGED PISTON HAS BEEN SPECIFICALLY DEVELOPED FOR THE STAR MOTOR, OFFERING SUPERIOR STRENGTH WHILE WEIGHING ONLY 60% OF THE STOCK CAST PISTON. IT HAS AN APPLICATION DEVELOPED PROFILE THAT WENT THROUGH SEVERAL CONFIGURATIONS OVER THE YEARS TO PERFECT. IT IS MADE OF A LOW EXPANSION ALLOY THAT ALLOWS IT TO BE FIT WITH AS LITTLE AS .0025" CLEARANCE. A TIGHT CLEARANCE KEEPS THE PISTON "SQUARE" IN THE BORE FOR BETTER RING SEAL AND HEAT TRANSFER. EXCELLENT SEALING IS ACCOMPLISHED BY A 1MM COMPRESSION RING, LOCATED SO IT WILL NOT BE EXPOSED INTO THE TRENCH AREA, AND A 2.8MM THREE PIECE OIL RING.



THESE PISTONS CAN BE USED THE USED IN OTHER TECUMSEHS; SUCH AS THE SNO-KING 120, VM220 & HM100. THE VSP SERIES OF PISTONS HAVE A COMPRESSION HEIGHT OF .770" AND WORK WITH THE +.400" (4.350") LONG ROD. THE VSP5 SERIES OF PISTONS HAVE A COMPRESSION HEIGHT OF .670" AND WORK WITH THE +.500" (4.450") LONG ROD. THE PISTON IS PRICED WITH RINGS, PISTON PIN AND LOCKS. THE BIG BORE SIZES ARE AVAILABLE ONLY IN THE .670" COMPRESSION HEIGHT AND THE CYLINDER MUST BE SLEEVED USING THE P/N BBS LISTED BELOW OR EQUIVALENT.

THESE PISTONS CAN BE USED THE USED IN OTHER TECUMSEHS; SUCH AS THE SNO-KING 120, VM220 & HM100.

P/N VSP PISTON USE WITH 4.350" ROD	P/NVSP5 PISTON USE WITH 4.450" ROD	SIZE	PRICE
VSP-STD	VSP5-STD	STANDARD	\$135.00
VSP-005	VSP5-005	+.005"	\$135.00
VSP-010	VSP5-010	+.010"	\$135.00
VSP-015	VSP5-015	+.015"	\$135.00
VSP-020	VSP5-020	+.020"	\$135.00
VSP-025	VSP5-025	+.025"	\$135.00
VSP-030	VSP5-030	+.030"	\$135.00
VSP-035	VSP5-035	+.035"	\$135.00
VSP5-125*^	VSP5-125*	+.125"	\$135.00
VSP5-130*^	VSP5-130*	+.130"	\$135.00
VSP5-135*^	VSP5-135*	+.135"	\$135.00
VSP5-140*^	VSP5-140*	+.140"	\$135.00
VSP5-151*^	VSP5-151*	+.151"	\$135.00
VSP5-190*^	VSP5-190*	+.190"	\$135.00
VSP5-200*^	VSP5-200*	+.200"	\$135.00
VSP5-205*^	VSP5-205*	+.205"	\$135.00
VSP5-210*^	VSP5-210*	+.210"	\$135.00
VSP5-215*^	VSP5-215*	+.215"	\$135.00
VSP5-220*^	VSP5-220*	+.220"	\$135.00
VSP5-225*^	VSP5-225*	+.225"	\$135.00
VSP5-230*^	VSP5-230*	+.230"	\$135.00
VSP5-235*^	VSP5-235*	+.235"	\$135.00
VSP5-240*^	VSP5-240*	+.240"	\$135.00
VSRS + SIZE	VSRS+SIZE	RING SET ALL	\$26.95
VTPP PISTON PIN	VTPP PISTON PIN	ALL	\$17.95
VTPC PR PIN LOCKS	VTPC PR PIN LOCKS	ALL	\$3.20

*REQUIRES CYLINDER SLEEVE P/N BBS \$62.95 OR PREPARED CYLINDER. SEE PAGE 7

^VSP5 SERIES PISTON MUST BE USED WITH 4.350" ROD & BSC200 OR BSCN200 STROKER CRANK.

HONDA GX390 AND BIG CLONE PISTONS



FLAT TOP FORGED PISTONS WITH THE SAME TWO RING LOW DRAG DESIGN AS OUR STAR PISTONS. 1.110" COMPRESSION HEIGHT AND .787" DIAMETER PIN FOR USE WITH OEM LENGTH ROD. PISTONS ARE PRICED WITH PISTON PIN, LOCKS AND RINGS.

P/N OHVP SERIES PISTON	BORE SIZE	PRICE
OHVP- STD	STANDARD 3.467" (88MM)	\$135.00
OHVP- 010	+ .010"	\$135.00
OHVP- 020	+ .020"	\$135.00
OHVP – 077	+ .077" 3.5445" (90MM)	\$135.00
OHVP – 087	+ .087"	\$135.00
OHVP-097	+ .097"	\$135.00
VHPP PISTON PIN	ALL	\$17.95
VHRS + SIZE	RING SET ALL	\$26.95
VHPC PR PIN LOCKS	ALL	\$3.20

SPECIAL PISTONS FOR USE WITH VSR40ND ROD – SEE CONNECTING ROD LISTINGS FOR USE WITH REGROUND STROKER CRANKS. CALL FOR DETAILS.

P/N OHVSP SERIES PISTON	BORE SIZE	PRICE
OHVSP-STD	STANDARD 3.467" (88MM)	\$135.00
OHVSP-010	+ .010"	\$135.00
OHVSP-077	+ .077" 3.5445" (90MM)	\$135.00
OHVSP-087	+ .087"	\$135.00
OHVSP-117	+ .117"	\$135.00
VTPP PISTON PIN	ALL	\$17.95
VHRS	RING SET ALL	\$26.95
VTPC PR PIN LOCKS	ALL	\$3.20

BILLET STAR CRANKS



THEY ARE MADE FROM HEAT TREATED STEEL. EXTRA PROCESS CONSIDERATION HAS BEEN MADE TO MAKE THEM STRAIGHTER THAN THE OEM STAR CASTING. THE 5/8-18 FLYWHEEL RETAINING THREAD IS LARGER AND STRONGER THAN STOCK TO ELIMINATE BREAKAGE. THEY ARE CLEARANCED FOR USE WITH HIGH LIFT CAMS. THEY CAN BE ADAPTED, WITH ADDITIONAL CAM CLEARANCE, TO THE 11-13HP SNOW KING OHV MODELS.

OUR NARROW CRANK IS 1.25" SHORTER THAN THE STOCK CRANK AND MAKES YOUR ENGINE THAT MUCH NARROWER. THIS CUTS IN HALF THE DIFFERENCE IN WIDTH BETWEEN THE STAR AND A BRIGGS RAPTOR: ESPECIALLY USEFUL WHERE ROOM IS AT A PREMIUM AND WITH TORQUE CONVERTER SET UPS. ALSO, A SHORTER CRANK IS A STIFFER CRANK WHICH RUNS TRUER, GIVES BETTER SEAL LIFE AND HELPS KEEP CHAINS FROM BEING THROWN OFF.

ALL VERSIONS COME WITH GEAR.

P/N	DESCRIPTION	PRICE
BSC	BILLET STAR CRANK - 2.532" STROKE (STANDARD)	\$450.00
BSC200	BILLET STAR CRANK - 2.732" STROKE	\$450.00
BSCN200*	BILLET STAR CRANK - 2.732" STROKE	\$450.00
VSCGS	REPLACEMENT CRANK GEAR	\$38.95
VSCGP	SQUARE DRIVE CRANK GEAR PIN	\$2.95
VBSN	STARTER NUT FOR USE WITH ABOVE CRANKS	\$14.95

*MUST BE USED WITH OUR BILLET SIDE COVER P/N VSBSC

STAR REPLACEMENT CRANKSHAFTS

WE HAVE A LIMITED NUMBER OF NEW 10HP TECUMSEH POINT IGNITION TYPE CRANKS THAT ARE SUPPLIED WITH A TAPERED SLEEVE THAT WILL FUNCTION THE SAME AS THE ORIGINAL 36603K STAR CRANK. \$160.00

CAMSHAFTS

ALL NON-STOCK CAMS REQUIRE THAT THE CRANKSHAFT BE CLEARANCED TO MISS THE LOBES

PART #	APPLICATION	LIFT	RECOMMENDED SPRINGS	PRICE
PC707	HIGH RPM STOCK	.325"	VS105 SINGLE	\$135.00
PC703	TORQUE	..385"/.395"	VS105 SINGLE	\$135.00
PC706	MID RANGE	.435"	VSDC DUAL	\$135.00
VSC3	MIDRANGE*	..460"	VSDC DUAL	\$135.00
VSC5	MIDRANGE*	.500"	VSDC	\$135.00
PC703R	OHV^	..385"/.395"	VSDC	\$145.00

^ CAN BE USED IN REVERSE PORT STARS AND 5HP MOTORSPORTS ENGINES.

*SPECIAL TAPPET PN VST (LISTED BELOW) MUST BE USED. CYLINDER HEAD WILL NEED VALVE CLEARANCE POCKETS (SEE PREPARED HEAD) OR BILLET HEAD.

VALVETRAIN COMPONENTS

PART #	APPLICATION	NOTES/DESCRIPTION	PRICE
36805K	STOCK	OEM YELLOW MOTORSPORTS SPRINGS	\$7.00/PR
VS105	STOCK/MOD	HI PERFORMANCE SPRINGS	\$14.00/PR
VSDC	MODIFIED	DUAL COIL VALVE SPRINGS	\$21.00/PR
VRK1	STOCK + MOD	RETAINER & KEEPER KIT	\$12.15
VRK2	MODIFIED	RETAINER & KEEPER KIT FOR DUAL SPRINGS	\$13.15
VSRK1	STOCK + MOD	VS105 SPRING & RETAINER KIT	\$25.95
VSRK2	MODIFIED	DUAL SPRING KIT FOR CAM LIFTS THRU .515"	\$32.95
VSEV	ALL	1.16" STD EXHAUST VALVE	\$19.95
VSIV	ALL	1.34" STD INTAKE VALVE	\$19.95
VSIV4	MODIFIED	1.44" INTAKE VALVE*	\$19.95
VSIV5	MODIFIED	1.5" INAKE VALVE*	\$19.95
VS4	MODIFIED	SEAT FOR 1.44" VALVE	\$7.50
VS5	MODIFIED	SEAT FOR 1.5" VALVE	\$7.50
VST	MODIFIED	TAPPETS FOR ALL APPLICATIONS	\$10.95/PR
VG	ALL	ALUMINUM-BRONZE GUIDES	\$9.95/PR

*REQUIRES APPROPRIATE VALVE SEAT LISTED IN TABLE

NOTE 1 THE VS105 VALVE SPRING HAS THE SAME PHYSICAL APPEARANCE THE ORIGINAL STOCK STAR SPRING, BUT HAS A HIGHER SPRING RATE SO THE TAPPET CAN PROPERLY FOLLOW THE CAM LOBE PROFILE. WE RECOMMEND THAT THE VALVE SPRINGS BE REPLACED EVERY EIGHT RACES FOR BEST PERFORMANCE IN HIGH RPM STOCK APPLICATIONS.

NOTE 2 OUR VSRK DOUBLE VALVE SPRING KIT IS APPLICATION DEVELOPED AND INCLUDES RETAINERS AND KEEPERS. IT REQUIRES NO SPACERS TO USE. THIS KIT WILL ALLOW AN ENGINE USING OUR LARGE 1.5" VALVE TO RUN TO 9000RPM. THIS SPRING KIT MUST BE USED WITH VSC3 OR VSC5 CAM AND OR VSIV5 VALVE AND IS RECOMMENDED FOR USE WITH PC703AND PC706 CAM AND ALL OVERSIZE VALVES.

CAM KITS

CAM PACKAGED WITH TAPPETS, SPRINGS (CK3 AND CK5 KITS INCLUDE DUAL VALVE SPRING RETAINERS & KEEPERS) - EVERYTHING NEEDED TO INSTALL YOUR CAM: NO MISMATCHED COMPONENTS AND NOTHING FORGOTTEN.

P/N	DESCRIPTION	PRICE
CK707	PC707 CAM (SEE CAMSHAFTS ABOVE) AND COMPONENTS KIT	\$155.00
CK703	PC703 CAM (SEE CAMSHAFTS ABOVE) AND COMPONENTS KIT	\$155.00
CK706	PC706 CAM (SEE CAMSHAFTS ABOVE) AND COMPONENTS KIT	\$155.00
CK706DS	PC706 CAM (SEE CAMSHAFTS ABOVE) AND DUAL SPRING KIT	\$174.00
CK3	VSC3 CAM (SEE CAMSHAFTS ABOVE) AND COMPONENTS KIT	\$174.00
CK5	VSC5 CAM (SEE COMASHFTS ABOVE) AND COMPONENTS KIT	\$174.00



PREMIUM CRANK GEAR

OUR PREMIUM CRANK GEARS ARE MADE OF HEAT TREATED 4340 CHROME MOLY STEEL.

ALTHOUGH WE ARE ADVOCATES OF MAINTAINING A PRESS FIT OF THE CRANK GEAR, THERE ARE COMPETITORS WHO WANT A SLIGHTLY LOOSER FIT TO FACILITATE CHANGING CAM TIMING AT THE TRACK: JUST AS BRIGGS RACERS HAVE DONE FOR YEARS. HOWEVER, THE TECUMSEH ROUND PIN IS NOT DESIGNED TO DRIVE THE CRANK GEAR, AS IT CONTACTS THE GEAR WITH ONLY A LINE OF VIRTUALLY NO AREA. USING THIS PIN WITH A LOOSE FITTING GEAR MAY CAUSE UNACCEPTABLY FAST WEAR, RESULTING IN EXCESSIVE GEAR "SLOP" OR LASH AND ERRATIC PERFORMANCE. THE PIN MAY EVEN

SHEAR OFF, WHICH CAN BE CATASTROPHIC WHEN HIGH LIFT CAM LOBES COLLIDE WITH THE CRANK. THIS SQUARE DRIVE PIN IS MADE FROM HARDENED STAINLESS STEEL AND IS CHEAP INSURANCE FOR ALL APPLICATIONS.

PART #	DESCRIPTION	PRICE
VSCGS	4340 ALLOY CRANK GEAR	\$38.95
VSCGP	SQUARE DRIVE GEAR PIN	\$2.95
33628	SPACER -GOES BETWEEN THE GEAR AND PTO BALL BEARING	\$4.28

STAR CYLINDER

WE HAVE STAR CYLINDERS. THESE ARE THE STRONGER "NEW STYLE" CASTINGS FROM THE LAST PRODUCTION RUN MADE. THEY COME WITH DOWEL PINS, DRAIN PLUGS AND FLYWHEEL SIDE SEAL. P/N 37042K \$129.95
NEW CYLINDER COVERS ARE AVAILABLE. THEY COME WITH PTO SEAL INSTALLED. P/N 36967K \$29.95



BILLET SIDE COVER

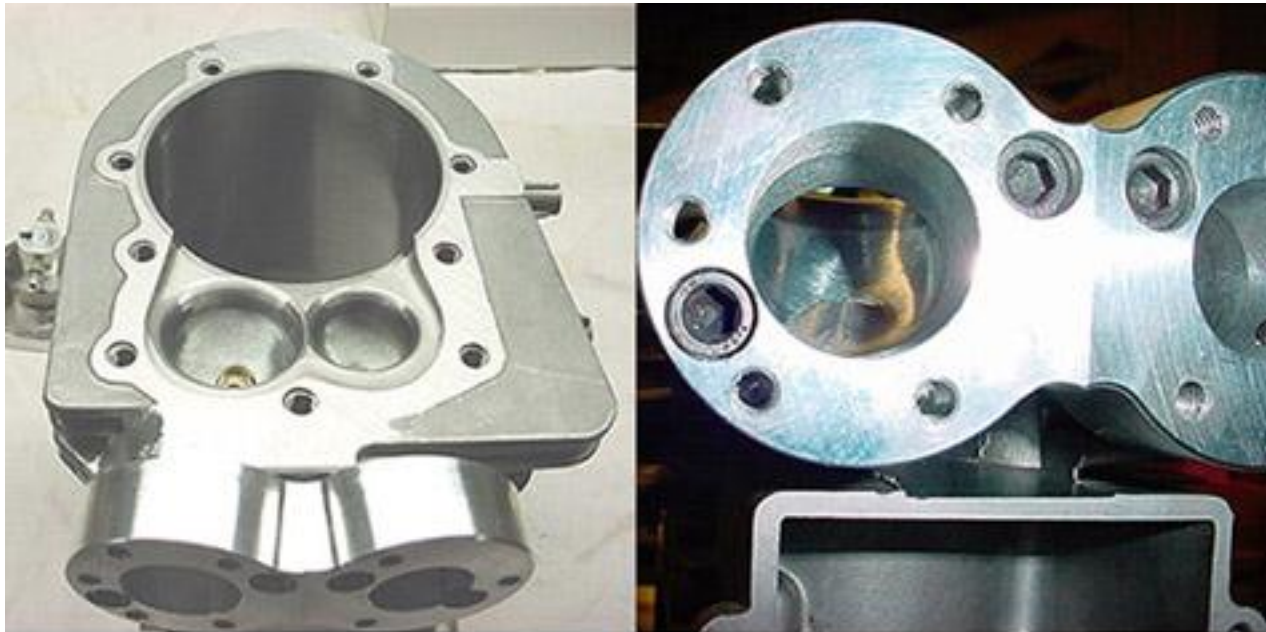
OUR 6061 ALUMINUM BILLET SIDE COVER IS STRONG AND COMPACT, FEATURING RADIUSED CORNERS AND INTERNAL RIB POCKETS. THE CAM RUNS IN A BALL BEARING THAT IS MORE PRECISELY POSITIONED TO THE CRANK AND LOCATOR PINS THAN THE ORIGINAL EQUIPMENT COVER. THERE ARE NO CRANK BEARING RETAINERS TO SEEP OIL. THE INCLUDED DOUBLE LIP OIL SEAL WILL HELP KEEP CRANKCASE OIL FROM BECOMING THAT MYSTERIOUS GRUNGY FILM ON THE CLUTCH. WHEN THIS COVER IS USED WITH OUR NARROW BILLET CRANK (P/N BSCN200), YOUR STAR ENGINE WILL BE 1.25" SLIMMER. COVER COMES COMPLETE WITH CAM BEARING, STAINLESS HARDWARE, FILLER PLUG AND GASKET. P/N VSBSC \$139.95
REPLACEMENT DOUBLE LIP SEAL P/N 33625DL \$5.95

DU SELF-LUBRICATING CYLINDER MAIN BEARING

GREAT INSURANCE FOR YOUR STAR CYLINDER. A DU BEARING COMBINES THE LOAD CAPACITY ADVANTAGES OF A PLAIN METALLIC BEARING WITH A UNIQUE SELF LUBRICATING ABILITY THAT ALLOWS SUCCESSFUL ENGINE OPERATION AT HIGH RPM EVEN WITH LITTLE OR INTERMITTENT LUBRICATION. IF YOU EVER FORGET TO PUT IN OIL, THE DU WILL PREVENT THE LOSS OF THE CRANK AND THE BLOCK. ALSO, IT CAN BE REPLACED IF THE TEFLON SURFACE WEARS OUT OR IS DAMAGED.

PART #	DESCRIPTION	PRICE
VSDU	DU BEARING WITH CRANK SEAL	\$14.95
37042K-1	STAR CYLINDER WITH DU BEARING INSTALLED	\$165.00

PREPARED CYLINDERS



37042K-10 3.50" BORE PREPARED CYLINDER

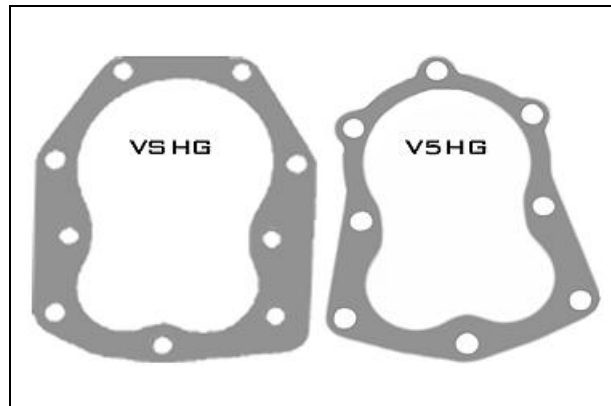
ALL PREPARED CYLINDERS COME WITH A 32630 MAG SIDE SEAL. TO ORDER, ADD THE NUMBER OF THE OPERATION YOU WANT TO THE END OF THE CYLINDER PART NUMBER, WHICH IS 37042K.

#	CYLINDER WITH SERVICE PERFORMED	PRICE
1	CYLINDER WITH DU BEARING INSTALLED – VALVE GUIDES NOT INCLUDED	\$165.00
2	CYLINDER WITH INSTALLED VALVE SEAT FOR 1.44" OR 1.5" INTAKE VALVE- NO DU BEARING – VALVE GUIDES NOT INCLUDED	\$175.00
3	CYLINDER WITH BOTH ABOVE OPERATIONS – VALVE GUIDES NOT INCLUDED	\$215.00
4	TRACKMASTER 1 BASIC PORTED CYLINDER-NO EPOXY. WILL RAISE THE POWER OF A STOCK STAR 25%. GUIDES & VALVES INCLUDED. MULTI-ANGLE VALVE JOB AND VALVES SEALED TO 17+ INCHES OF VACUUM.	\$350.00
5	SAME AS #4 ABOVE BUT WITH BIG INTAKE SEAT AND VALVE.	\$400.00
10	RESLEEVED, BIG BORE CYLINDER "ALL THE WAY". ALL METAL, REVECTORED, FULLY MODIFIED PORTS. 1.5" OFFSET INTAKE VALVE BY 1.205" EXHAUST VALVE. MULTI-ANGLE VALVE JOB, SEALED TO 17+ INCHES OF VACUUM. BLOCK DECKED, TRENCH LOWERED AND MATCHED TO COMPRESSION RING HEIGHT. BACK SIDE OF VALVE POCKETS UNSHROUDED AND MATCHED TO OUR BILLET HEAD CHAMBER. STROKER CLEARANCE MACHINED INTO BOTTOM END. DUAL PORT ADAPTER MATCHED AND INSTALLED. SPECIFY BORE BETWEEN 3.4375" AND 3.540".	\$725.00

RELATED COMPONENTS FOR PREPARED CYLINDERS

PN	DESCRIPTION	PRICE
VG	PAIR OF VALVE GUIDES	\$9.95
VSEV	1.16" EXHAUST VALVE	\$19.95
VSIV	1.34" INTAKE VALVE	\$19.95
VSIV4	1.44" INTAKE VALVE	\$19.95
VSIV5T	1.50" INTAKE VALVE	\$19.95
BBS	BIG BORE FLANGED SLEEVE	\$62.95

ALUMINUM HEAD GASKETS



VSHG	STAR HEAD GASKET-.048" THICK	\$7.50
VSHG5C	.048" GASKET CLEARANCED FOR BIG VALVES	\$8.50
V5HG	5HP HEAD GASKET-.038" THICK	\$7.50
G200	HONDA G200 HEAD GASKET - .038" THICK	\$5.00

CYLINDER HEADS



WE HAVE A LIMITED NUMBER OF P/N 36449 NEW STAR HEADS. RECONDITIONED TECUMSEH HEADS ARE ALSO AVAILABLE AT SLIGHTLY LESS COST. SOME RECHAMBERED OEM HEADS ARE CURRENTLY IN STOCK AS WELL. THESE ARE MACHINED WITH THE SAME PROGRAM AS OUR BILLET HEADS AND WILL ACCOMMODATE BIG VALVES AND HIGH LIFT CAMS.

OUR VSDH BILLET HEAD FEATURES A HIGH FLOW UNSHROUDED VALVE POCKET DESIGN AND DUAL SPARK PLUG CAPABILITY.

THE REAR PLUG HOLE HAS BEEN RELOCATED TO MISS OVERSIZE VALVES.

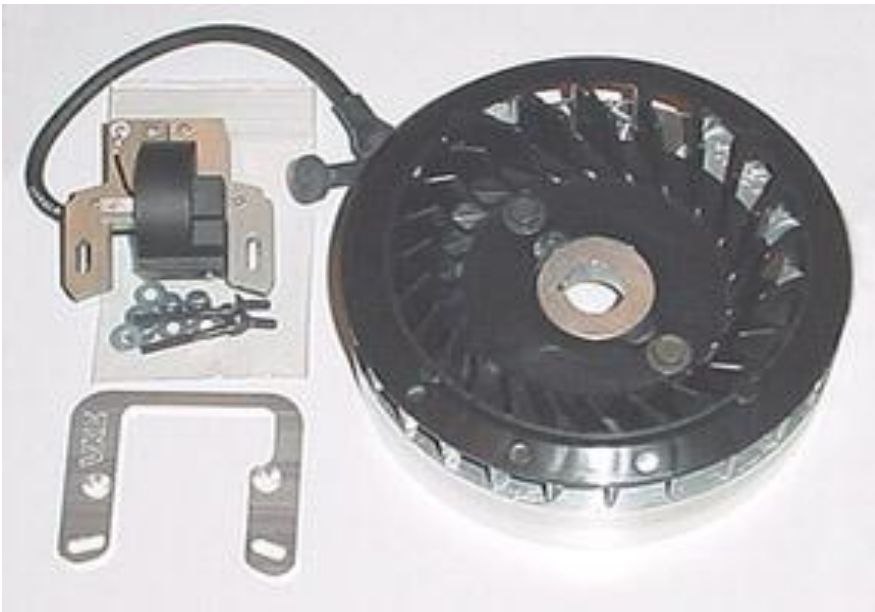
FOR SINGLE IGNITION APPLICATION, A FRONT SPARK PLUG HOLE PLUG IS AVAILABLE.

P/N	HEAD TYPE	PRICE
36449	NEW STOCK STAR HEAD	\$45.00
36449R	RECONDITIONED STOCK STAR HEAD	\$35.00
36449-CNC	RECHAMBERED NEW STAR HEAD	\$75.00
VSDH	BILLET STAR HEAD	\$99.95
SPP	OPTIONAL SPARK PLUG PLUG	\$5.00
VTCR	OPTIONAL COMPRESSION RELEASE	\$17.95

IGNITION SYSTEMS & COMPONENTS**HIGH PERFORMANCE IRON FLYWHEEL & IGNITION KIT**

THE MOST ECONOMICAL KIT WE OFFER. IT IS AVAILABLE IN LIMITED QUANTITIES. A COMPLETE, ADJUSTABLE IGNITION SYSTEM COMPRISED OF HIGH PERFORMANCE COIL, COIL BRACKET, SPARK PLUG BOOT, 6 POUND (25% LIGHTER THAN STOCK) IRON FLYWHEEL, MOUNTING HARDWARE, TIMING CHART AND INSTRUCTIONS. RECOMMENDED FOR STOCK AND MODIFIED ENGINES NOT EXCEEDING 7500 RPM.

P/N	DESCRIPTION	PRICE
VTIK	HIGH PERFORMANCE IGNITION KIT	\$139.95
VTICB	COIL BRACKET W/HARDWARE	\$14.95
VHPC	HIGH PERFORMANCE COIL	\$49.95

BILLET ALUMINUM FLYWHEEL & IGNITION KIT

THIS IGNITION SYSTEM PROVIDES A STABLE SPARK TO 9000 RPM. THE FLYWHEEL WEIGHS IN AT 4LBS 9OZS WITH REMOVABLE PLASTIC FAN. THIS IS A COMPLETE KIT. EVERYTHING NEEDED FOR THIS CONVERSION IS INCLUDED. TWO TYPES ARE OFFERED – ONE FOR THE HONDA GX390 AND BIG CLONES, AND ONE FOR THE TECUMSEH STAR. IN ADDITION, THERE IS A DUAL PLUG VERSION STAR KIT FOR USE WITH OUR BILLET HEAD. ASSOCIATED 3/4" HEX HEAD STARTER NUTS ARE LISTED BELOW

P/N	DESCRIPTION	PRICE
BHIK	BILLET HONDA FLYWHEEL & IGNITION KIT	\$185.00
BTIK	BILLET TECUMSEH FLYWHEEL & IGNITION KIT	\$185.00
BTIKDP	BILLET TECUMSEH FLYWHEEL & DUAL PLUG IGN KIT	\$200.00
HBF	HONDA FLYWHEEL ONLY	\$125.00
TBF	TECUMSEH FLYWHEEL ONLY	\$125.00
VHICB	HONDA COIL BRACKET KIT	\$14.95
VTICB	TECUMSEH COIL BRACKET KIT	\$14.95
VHPC	HIGH PERFORMANCE COIL-ALL	\$49.95
VDPC	DUAL PLUG COIL	\$59.95
VHSN	HONDA & CLONE STARTER NUT	\$14.95
VBSN	STAR BILLET CRANK STARTER NUT	\$14.95
VSSN	TECUMSEH OEM CRANK STARTER NUT	\$14.95

INDUCTION

MIKUNI SUPER BN38 CARB

THIS HIGH PERFORMANCE MIKUNI MODEL 8113 IS MAXIMUM FLOW RATED FOR RACING APPLICATIONS. FUEL IS COARSE METERED BY REPLACEABLE SCREW IN HIGH AND LOW JETS AND FINE TUNED BY EXTERNAL ADJUSTABLE NEEDLE VALVES. THE LARGE CAPACITY FUEL PUMP NEEDS NO EXTERNAL AUXILLARY PUMP. A LONG THROW THROTTLE BELLCRANK GIVES BETTER THROTTLE CONTROL OVER YOUR BIG CC ENGINE.

OUR BN38 CARBS ARE READY TO RUN METHANOL AND COME COMPLETE WITH BILLET RAMSTACK / FILTER ADAPTER.

WE ALSO OFFER IN LIMITED QUANTITY A 44MM VERSION AND 34MM VERSION – INQUIRE.

NOTE: ALL OF THE BN SERIES CARBS REQUIRE 3" INLET AIR FILTERS - SEE BELOW.



P/N	DESCRIPTION	PRICE
BN38	MIKUNI BN 38MM METHANOL CARB	\$279.95
BN34	MIKUNI BN 34MM METHANOL CARB	\$279.95
BN44	MIKUNI BN 44MM METHANOL CARB	\$299.95
AFR46	4"DIA X 6" LONG PRE-OILED AIR FILTER	\$23.95
AFR46PF	FOAM PRE-FILTER FOR ABOVE FILTER	\$3.00
MIKBN-38/44SPR	CARB REBUILD KIT - ALL MODELS	\$44.95
BNJS	HIGH & LOW JET SET	\$6.50

DUAL PORT ADAPTER & INTAKE RUNNERS



THE DUAL PORT ADAPTER ALLOWS HIGHER AIRFLOW THROUGH THE STAR ENGINE. 12 DEGREES OF DIVERGING ANGLE INCREASES THE AVAILABLE ROOM TO ACCOMMODATE LARGER INDUCTION AND EXHAUST COMPONENTS. MULTIPLE INTAKE PATTERNS ADAPT CARB INTAKE RUNNERS FROM HL TILLOTSONS THRU 46MM MIKUNIS. 3 HOLE EXHAUST FLANGE PATTERN SECURELY ATTACHES OUR 3/8" THICK FLANGE PIPES. OUR INTAKE RUNNER FOR 34MM AND 38MM MIKUNI SUPER BN CARBS, AS WELL AS HR TILLOTSONS, ATTACHES TO THE PORT ADAPTER WITH THREE SCREWS – AS DOES THE 42 THRU 46MM RUNNER. THE HL TILLOTSON INTAKE RUNNER CAN BE DIRECTLY ATTACHED TO THE CYLINDER OR THE DUAL PORT ADAPTER. A RUBBER SPIGOT MOUNT IS AVAILABLE TO MOUNT 30-34MM MIKUNI FLOAT CARBS TO THE **BN38IR** INTAKE RUNNER. ALL COMPONENTS COME WITH ASSOCIATED MOUNTING HARDWARE.

P/N	DESCRIPTION	PRICE
VSDPA12	STAR DUAL PORT ADAPTER	\$59.95
HLIR	HL TILLOTSON INTAKE INTAKE RUNNER –MATCHED FOR HL380 MODEL	\$39.95
HLIRP	HL TILLOTSON INTAKE RUNNER WITH INSTALLED PULSE TAP	\$44.95
BN38IR	MIKUNI BN34, BN38 AND TILLOTSON HR CARB INTAKE RUNNER	\$64.95
BN44IR	MIKUNI BN44 & BN46 CARB INTAKE RUNNER	\$69.95
VM34/200	RUBBER FLANGE TO SPIGOT ADAPTER 30-34MM MIKUNI CARBS	\$19.95
VPF	BRASS PULSE FITTING 1/4-28 THREAD	\$3.95

EXHAUST PIPES



OUR PROPIPE PICTURED AT LEFT MOUNTS TO THE DUAL PORT ADAPTER LISTED ABOVE. IT IS 1-3/8" DIAMETER BY 15" LONG AND FEATURES A 3/8" THICK THREE SCREW MOUNT FLANGE. COMES WITH STAINLESS MOUNTING HARDWARE.

P/N VSP13815 \$39.95

STANDARD MUFFLER STYLE STAR PIPE MOUNTS DIRECTLY TO CYLINDER EXHAUST PORT.

P/N ST-M \$39.95

RLV 1 5/16" MUFFLER **P/N RLVM \$42.95**

RLV MUFFLER CLAMP **P/N RLVMC \$7.95**

COMPRESSION RELEASE



THE COMPRESSION RELEASE IS BACK! MAKES STARTING ANY BIG DISPLACEMENT / HIGH COMPRESSION ENGINE MUCH EASIER. IT INSTALLS IN THE HEAD WITH A 10M x 1 TAPPED HOLE. SHORT (LESS THAN 1 1/2" LONG) AND COMPACT, IT CAN BE INSTALLED INTO MORE APPLICATIONS THAN OTHERS. FOR STAR ENGINES RUNNING OUR BILLET HEAD AND SINGLE PLUG IGNITION, A SLICK AND EASY METHOD IS TO INSTALL THIS INTO THE SPARK PLUG PLUG. P/N VTCR \$17.95

MULTI-MOUNT



THIS MOTOR MOUNT IS DESIGNED TO SIMPLIFY INSTALLING THE BIG STAR ENGINE ONTO YOUR CHASSIS. THE VKE MULTI-MOUNT SOLVES TWO PROBLEMS. FIRST, THE STAR'S LARGE BLOWER HOUSING WILL, IN MANY INSTALLATIONS, BE TOO CLOSE TO THE DRIVE TIRE, EVEN WHEN MOVED AS FAR FORWARD AS POSSIBLE. THE MULTI-MOUNT PLACES THE ENGINE AN INCH FORWARD SO YOU GAIN BOTH TIRE CLEARANCE AND CHAIN ADJUSTMENT. SECOND, THIS MOUNT OFFERS THREE LATERAL MOUNTING POSITIONS SO IT'S EASY TO ACCOMMODATE THE EXTRA WIDTH OF THE STAR. THIS IS ESPECIALLY HELPFUL WHEN SETTING UP CHASSIS' WITH LARGE SEATS. MOUNT COMES COMPLETE WITH CLAMPS AND HARDWARE.

P/N	DESCRIPTION	PRICE
VTMM	1 1/8" TUBE, INTERNATIONAL CENTERS MOUNT	\$49.95
VTMM25	1 1/4" TUBE, INTERNATIONAL CENTERS MOUNT	\$49.95
VTMMA	1 1/8" TUBE, AMERICAN CENTERS MOUNT	\$49.95
VMMC	1 1/8" INTERNATIONAL CENTERS CLAMP	\$8.00
VMMC25	1 1/4" INTERNATIONAL CENTERS CLAMP	\$8.00
VMMCA	1 1/8" AMERICAN CENTERS CLAMP	\$8.00

STAR TORQUE PLATE

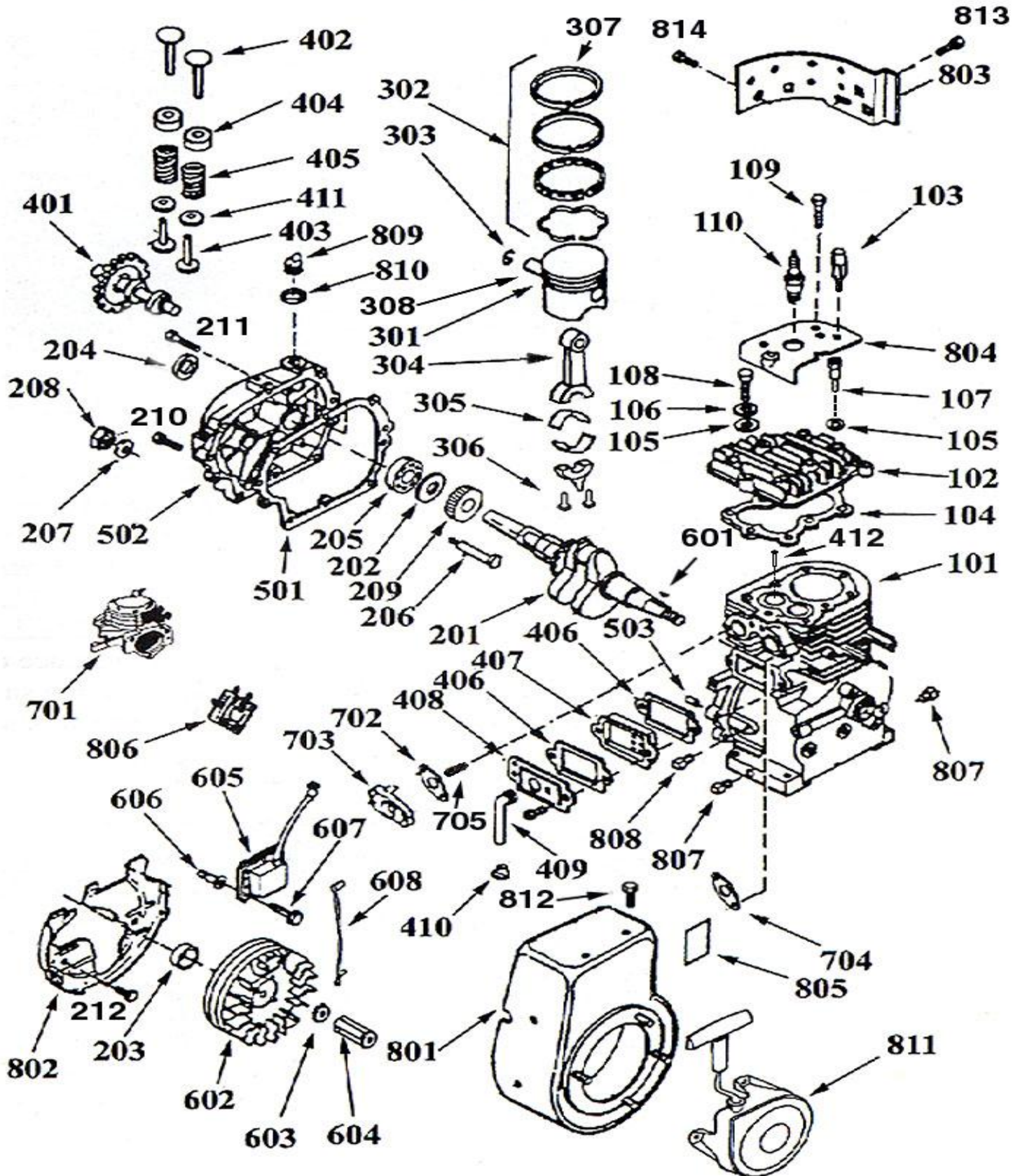
MATCHES THE CYLINDER HEAD IN THICKNESS. MADE FROM STRESS FREE, STABLE ALUMINUM TOOLING PLATE. P/N VSTP \$31.95



TECUMSEH CHAIN GUARD

HEAVY GAUGE STEEL CHAIN GUARD. FINISHED IN BLACK, THIS GUARD IS WIDE ENOUGH FOR USE WITH OUTBOARD INSTALLED CLUTCHES AND INCLUDES MOUNTING HARDWARE . P/N VTCG \$4.95

SBH-9992 TECUMSEH STAR



SBH-9992 TECUMSEH STAR

101	1	37042K	CYLINDER	\$129.95	403	opt	34034	1.918" (short) VALVE LIFTER	\$5.45
102	1	36449	CYLINDER HEAD	POR	404	2	27882	VALVE SPRING CAP	NLA
103	opt	VTCR	COMPRESSION RELEASE	\$17.95	405	2	36805K	VALVE SPRING - EA	\$3.50
104	1	36956K*	CYLINDER HEAD GASKET-.065"std	\$6.95	405	opt	VS105	HIGH PERFORMANCE SPRINGS	\$14.00/PR
104	opt	VSHG	.048" ALUMINUM HEAD GASKET	\$8.50	406	2	27896A	TAPPET BOX GASKET	\$1.10
105	9	650691	WASHER	\$0.85	407	1	28423	TAPPET BOX CHECK VALVE ASSY	\$12.95
106	7	650690	BELLEVILLE WASHER	\$0.85	408	1	VTTBC	BILLET TAPPET BOX COVER	\$14.60
107	2	650727	SCREW, 5/16-18 x 1-3/4"	\$2.50	409	1	32447	TAPPET BOX TUBE	\$2.60
108	7	650694A	SCREW, 5/16-18 x 2"	\$1.50	410	1	32446	TAPPET BOX TUBE GROMMET	\$0.65
109	2	650273	SCREW, 5/16-18 x 5/8"	\$1.38	411	1	VTRK	RETAINER & KEEPER KIT	\$12.95
110	1	33636	SPARK PLUG - PLATINUM	\$6.95	412	1	VG	VALVE GUIDE SET	\$9.95
201	1	36603R	CRANKSHAFT-REPLACEMENT	\$160.00	501	1	37342	CYLINDER COVER GASKET	\$4.14
201	opt	36603RC	CRANKSHAFT - big cam clearanced	\$185.00	502	1	36967K	CYLINDER COVER	\$29.95
201	opt	BSC	STEEL BILLET CRANKSHAFT	\$450.00	503	2	27652	DOWEL PIN	1.25
201	opt	BSC200	+.200" STROKE CRANKSHAFT	\$450.00	601	1	32589	FLYWHEEL KEY	\$1.15
201	opt	BSCN	NARROW BILLET CRANKSHAFT	\$450.00	602	1	611084	FLYWHEEL	\$72.99
201	opt	BSCN200	+.200" NARROW CRANKSHAFT	\$450.00	602	opt	TBF	BILLET ALUMINUM FLYWHEEL	\$125.00
202	1	33628	THRUST WASHER	\$4.28	603	1	650815	BELLEVUE WASHER	\$2.00
203	1	32630	OIL SEAL-FLYWHEEL	\$4.99	604	1	650871	FLYWHEEL NUT	\$2.25
204	1	33625	OIL SEAL-POWER TAKE OFF	\$7.28	604	opt	VSSN	NUT FOR ELECTRIC STARTER	\$14.95
204	opt	33625DL	PTO SEAL-DOUBLE LIP MAX SEAL	\$5.95	605	1	36605K	COIL	NLA
205	1	33627G	BALL BEARING	\$12.76	606	2	651024	COIL MOUNTING STUD	\$3.00
206	2	31855	BEARING RETAINER	\$3.25	607	2	651007	COIL MOUNTING SCREW	\$1.00
207	2	650778	LOCK WASHER	\$0.70	608	1	35187	GROUND WIRE	\$1.00
208	2	650580	LOCK NUT, 10-24	\$0.40	701	1	32729K	HL374 TILLOTSON STOCK CARB	\$87.02
209	1	VSCG	CRANK GEAR	\$38.95	702	1	27915A	CARB ADAPTER GASKET	\$1.00
210	7	650488	SCREW 1/4-20 X 1-1/4"	\$1.38	703	1	34349A	CARB ADAPTER	\$10.95
211	1	650493	SCREW 1/4-20 X 1-3/4"	\$1.38	704	1	35865	EXHAUST GASKET	\$1.00
212	2	650561	SCREW 1/4-20 X 5/8"	\$0.75	705	1pr	651037K	INTAKE STUDS - PACKAGE OF 2	\$4.83
301	1	VSP-size	.770"CH FORGED PISTON ASSY	\$135.00	801	1	33375E	BLOWER HOUSING	\$48.65
301	opt	VSP5-size	.670"CH FORGED PISTON ASSY	\$135.00	802	1	29536	BLOWER HOUSING BAFFLE	\$15.47
302	1	VSR5	RING SET - -STATE SIZE	\$26.95	803	1	33273A	BLOWER HOUSING EXTENSION	\$6.95
303	2	VTPC	PISTON PIN RETAINING RING-PAIR	\$3.20	804	1	33272C	CYLINDER HEAD COVER	\$6.95
304	opt	VSR40	CONNECTING ROD ASSY-4.350"	\$125.00	805	1	37237K	DECAL-SMALL 3.80" X 3.25"	\$1.95
304	opt	VSR50	CONNECTING ROD ASSY-4.450"	\$125.00	opt	37238K	DECAL-LARGE 7" X 10"	\$5.00	
305	1	VSRB	BEARING INSERT-STD VSR RODS	\$16.95	806	1	WFP	FUEL PUMP	\$25.00
305	opt	VSRB3	BEARING INSERT-.012" VSR RODS	\$18.95	807	2	27642	OIL DRAIN PLUG	\$1.00
306	1	VSRBK	ROD BOLT KIT	\$8.95	808	1	28534	OIL PLUG	\$1.00
308	1	VTPP	PISTON PIN	\$17.95	809	1	27625	OIL FILL PLUG	\$1.95
401	1	37177K	CAMSHAFT	POR	810	1	29673	OIL FILL PLUG GASKET	NLA
402	1	VS3460	VALVE SET - ONE EA INT & EX	\$39.90	812	2	650788	SCREW 5/16-18 X 3/4"	\$1.38
402	1	VSEV	EXHUAUST VALVE ONLY	\$19.95	813	1	30063	SCREW & LOCKWASHER	\$1.00
402	1	VSIV	INTAKE VALVE ONLY	\$19.95	814	1	650128	SCREW & LOCKWASHER	\$0.60
403	opt	VST	HEAVY DUTY VALVE LIFTERS	\$10.95/PR	1	VSGS	GASKET SET	\$12.95	
403	opt	36607K	2.070" (long) VALVE LIFTER	\$5.45					

ENGINES – NEW & USED

DESCRIPTION	PRICE
NEW STAR ENGINE KIT WITH FORGED JE PISTON ASSY AND VKE ROD SUPPLIED WITH HM100 STYLE BLOWER HOUSING	\$850.00
LIKE NEW STOCK STAR BUILT TO CUSTOMER SPECS. HAS JE PISTON AND VKE ROD, CRANE LEGAL STOCK CAM, YELLOW SPRINGS, HM100 BLOWER HOUSING, AIR FILTER, EXHAUST PIPE, MUFFLER, MOTOR MOUNT & 14T NORAM CLUTCH. DAUGHTER RAN IT DOWN THE STREET ONCE AND DECIDED RACING WASN'T FOR HER.	\$895.00
NEW BRIGGS 305 – DISASSEMBLED. HEAD MILDLY PORTED. MIGHT BE MISSING SOME HARDWARE. I'LL WORK WITH BUYER TO CORRECT ANYTHING MISSING	\$200.00
453CC BIG DISPLACEMENT CLONE ENGINE KIT. INCLUDES BASIC ENGINE (PARTIALLY DISASSEMBLED) . FORGED JE PISTON ASSY, VKE ROD, 4LB 9OZ BILLET FLYWHEEL AND PERFORMANCE IGNITION KIT AND GASKET SET..	\$995.00

STUFF FOUND IN BOXES THAT YOU PROBABLY DON'T WANT...BUT MAYBE

- KART RACEWEAR LEATHER DRIVING GLOVES
BLACK W/RED TRIM \$10.00/PR

QUANTITY	SIZE
2	CHILD XL
10	ADULT XS
6	ADULT S
5	ADULT M
3	ADULT L
3	ADULT XL



- AZUSA LONG GAUNTLET DRIVING GLOVES \$10.00/PR



QUANTITY	SIZE
1	CHILD M BLACK
1	CHILD L BLACK
1	ADULT XS BLACK
1	ADULT XS RED

STAR REFERENCE

DISPLACEMENT 21.8 CU IN (3.3124" BORE x 2.532" STROKE)
 ROD LENGTH: 3.950"
 CRANK ROD JOURNAL DIAMETER: 1.186"
 PTO DIAMETER: 1" (.9985")

STAR TORQUE RECOMMENDATIONS

SIDE COVER BOLTS 115-125 INLBS
 HEAD BOLTS (WHEN USING STOCK GRAPHITE GASKET) 180-200 INLBS
 HEAD BOLTS (WHEN USING SOLID ALUMINUM GASKET) 200 INLBS (USE SEALANT)
 FLYWHEEL NUT (OEM CRANK) 45 FTLBS
 FLYWHEEL NUT (VKE BILLET CRANK) 55 - 60 FTLBS
 CONNECTING ROD BOLTS:
 5HP STOCK 150-175 INLBS
 5HP CONTROLLED 130 INLBS
 STAR-ORIGINAL EQUIPMENT ROD 130 INLBS
 STAR- VKE SERIES I ROD (1/4"-28 BOLTS) 175 INLBS
 STAR-VKE SERIES II ROD (5/16-24 BOLTS) 230 INLBS (19 FTLBS)
 TAPPET BOX SCREWS 60-70 INLBS
 SPARK PLUG (USE OF ANTI-SEIZE RECOMMENDED) 180-200 INLBS

FREQUENTLY ASKED CLEARANCES

STAR PISTON CLEARANCE - MEASURED AT 90 DEGREES TO PISTON PIN AXIS
 STOCK TECUMSEH PISTON .004" (PREFERRED) -.005" (MEASURED AT BOTTOM OF SKIRT)
 VKE/JE FORGED PISTON .0025-.004" (MEASURED 1/2" UP FROM PISTON BOTTOM 90 DEGREES FROM WRIST PIN)

 CRANKSHAFT END PLAY .007"-.018" PREFERRED - FACTORY ALLOWS UP TO .029"

 ROD BEARING CLEARANCE (DIAMETRAL, 90 DEGREES TO SPLIT LINE) .0025"-.005"

 PISTON TO HEAD CLEARANCE (MINIMUM) .040"
 VALVES TO HEAD CLEARANCE (MINIMUM) .045"

OIL RECOMMENDATIONS

USE 16 TO 17 OUNCES IN THE 5HP ENGINES
 USE 21 OUNCES IN THE STAR ENGINE
 USE 14 OUNCES IN STAR WITH **VSBS** BILLET SIDE COVER
 CHANGE OIL AT LEAST TWICE ON RACE DAY. CHANGE/DRAIN OIL WHILE ENGINE IS WARM.