

TIME-SERT®

TIME FASTENER COMPANY
5301 unit G Longley lane
Reno Nevada 89511
(800) 423-4070 (775) 829-1026
www.timesert.com

NORTHSTAR 2004 PV8 M11x 2.0 HEADBOLT REPAIR KIT P/N J-42385-2030

- WARNING -

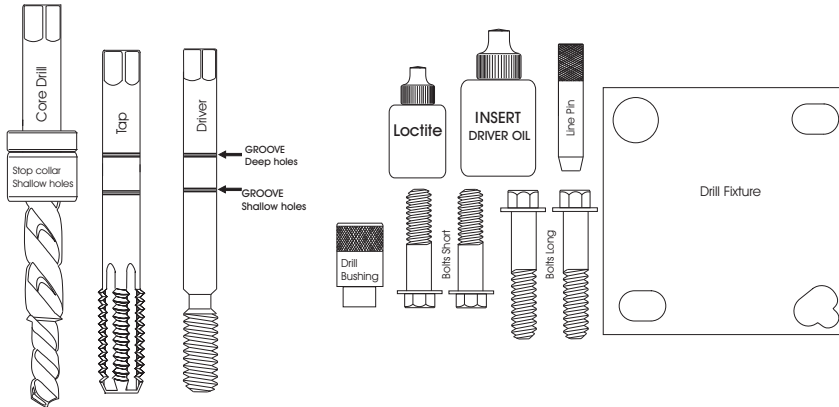
Cutting tools may shatter if broken. The wearing of safety glasses is required in the vicinity of their use.

CUTTING FLUID

A Cutting fluid is necessary for drilling and tapping. (WD40)

DRILL MOTOR

The use of a half inch drill motor is recommended for drilling.



Tools needed:	Qty
Drill fixture	1
Drill bushing	1
Alignment pin	1
Bolts short	2
Bolts Long	2
Step drill	1
Tap	1
Insert driver	1
Stop Collar for shallow holes	1
loctite	1
Driver oil	1
Inserts M11x2.0	10

INSTRUCTIONS

The NorthStar 2004 has 2 depths of holes, shallow on the upper bank are 29mm.
The deeper holes on the lower bank are 45.5mm.

STOP

IF REPAIRING THE UPPER BANK OF THE ENGINE YOU WILL **USE** THE 2034 STOP COLLAR ON THE CORE DRILL. "SHALLOW HOLES"
IF REPAIRING THE LOWER BANK OF THE ENGINE YOU WILL **REMOVE** THE 2034 COLLAR FROM THE CORE DRILL. "DEEP HOLES"

STEP 1

PLACE LARGEST HOLE IN DRILL FIXTURE OVER THE HOLE TO BE REPAIRED. PLACE BUSHING IN FIXTURE, THEN PLACE LINE UP PIN IN BUSHING TO PICK UP HOLE. DO NOT FORCE PIN INTO HOLE. USE BOLTS AND TIGHTEN TO SECURE FIXTURE IN PLACE. REMOVE LINE PIN.

STEP 2

USE A SUITABLE DRILL MOTOR AND STEP DRILL THE HOLE UNTIL THE STOP COLLAR ON THE DRILL TOUCHES THE TOP OF THE DRILL BUSHING. **Note:** USE THE 2034 STOP COLLAR FOR SHALLOW HOLES. SLOWLY AND CAREFULLY DRILL THE HOLE STRAIGHT! THIS WILL REQUIRE REMOVING DRILL AND DRILL BUSHING SEVERAL TIMES TO CLEAR CHIPS. CLEAN OUT ALL CHIPS.

NOTE: If drill bushing turns while drilling hole, Remove drill and drill bushing, Clean out all chips.
We recommend using a long air nozzle 6" or longer to blow out all chips.

STEP 3

TAP THROUGH THE DRILL BUSHING UNTIL THE APPROPRIATE GROOVE ON THE TAP LINES UP WITH THE TOP OF THE DRILL BUSHING. THIS WILL REQUIRE REMOVING THE TAP AND BUSHING SEVERAL TIMES TO CLEAR CHIPS. CLEAN ALL CHIPS USING BRAKE OR CONTACT CLEANER THAT WILL NOT LEAVE AN OILY RESIDUE, THE HOLE MUST BE CLEAN AND DRY. USE A FLASHLIGHT TO INSPECT THE HOLE FOR CHIPS AND CLEANLINESS.

STEP 4

USE INSERT DRIVER OIL (DO NOT USE Wd40).

REMOVE FIXTURE PLATE FOR FINAL STEP 4.

OIL THE THREADS OF THE INSERT DRIVER. SCREW AN INSERT ONTO THE DRIVER, APPLY A SMALL AMOUNT OF LOCTITE ON THE BOTTOM OUTSIDE THREADS OF THE INSERT AND SCREW THE INSERT INTO THE PREPARED HOLE. WHEN THE HEAD OF THE INSERT IS SEATED THE DRIVER WILL TIGHTEN UP, USE A LITTLE MORE POWER TO SCREW THE DRIVER THROUGH THE INSERT, UNTIL THE APPROPRIATE GROOVE OF THE DRIVER LINES UP WITH THE TOP OF ENGINE BLOCK. REMOVE INSERT DRIVER, REPAIR IS COMPLETE.

Please check for the latest torque specifications before assembling the engine.
Improper torque of the head can lead to thread failure.