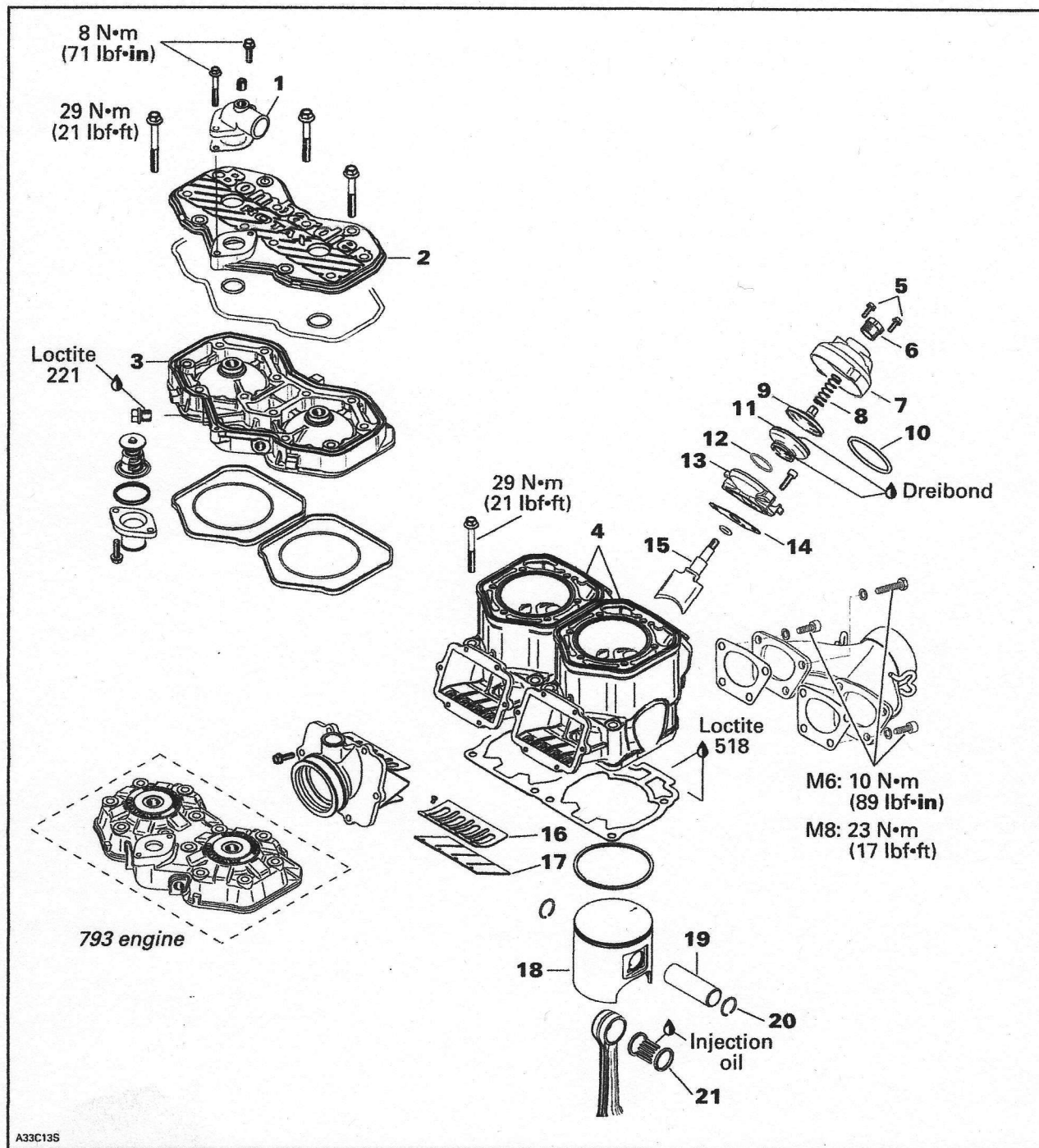


Section 04 ENGINE

Subsection 02 (593 HO AND 793 ENGINE TYPES)

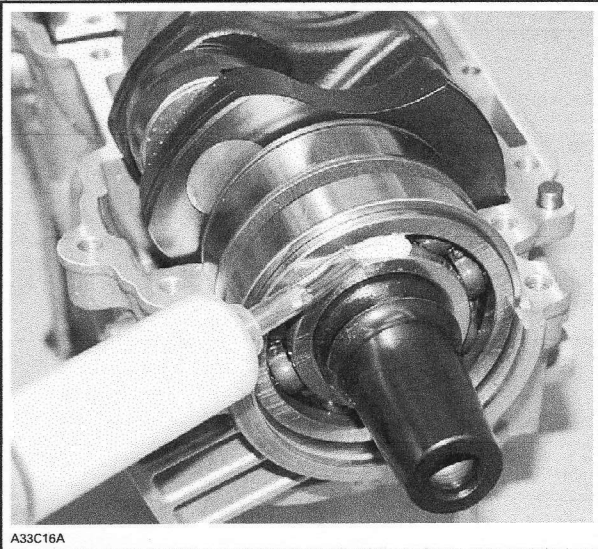
TOP END



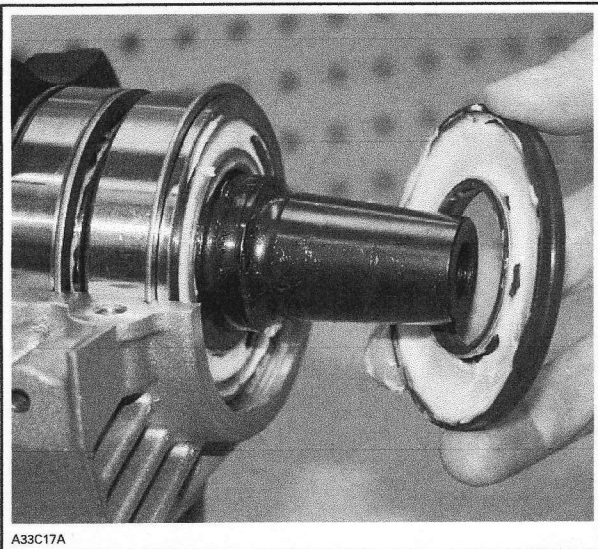
Section 04 ENGINE

Subsection 02 (593 HO AND 793 ENGINE TYPES)

With the syringe, fill the outer ball bearing and inner side of outer seal with 40 to 45 mL of Isoplex grease.



BALLS COATED WITH A SEAM OF GREASE

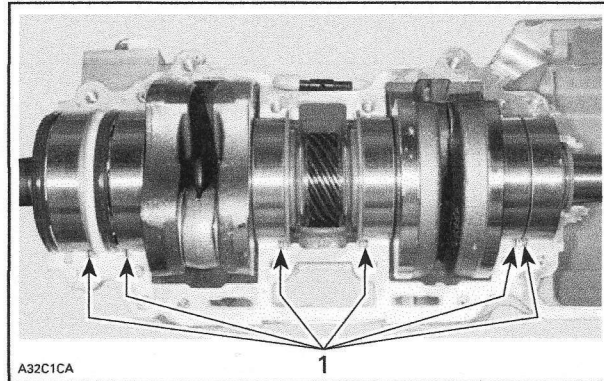


FILL WITH GREASE AND SET IN PLACE

Apply 6 mL of grease to MAG side outer bearing.

NOTE: If replaced with new bearing, do not apply grease as new bearings come with grease already applied.

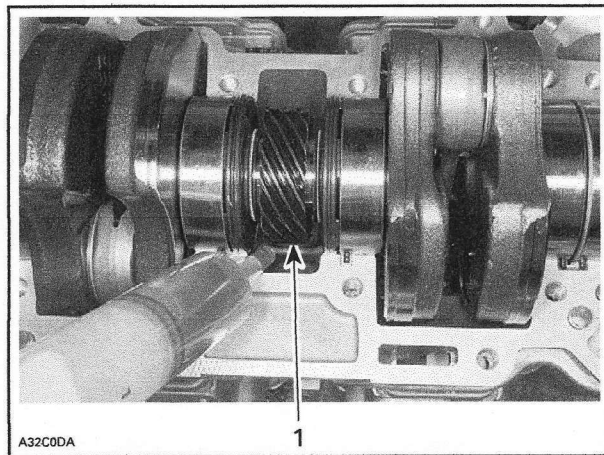
At crankshaft installation, position drive pins as illustrated.



TYPICAL

1. Position pins

Pour 50 mL (2 U.S. oz) of injection oil in the pan under central gear to lubricate pump gearing as per photo.



1. Oil bath

Crankcase Assembly

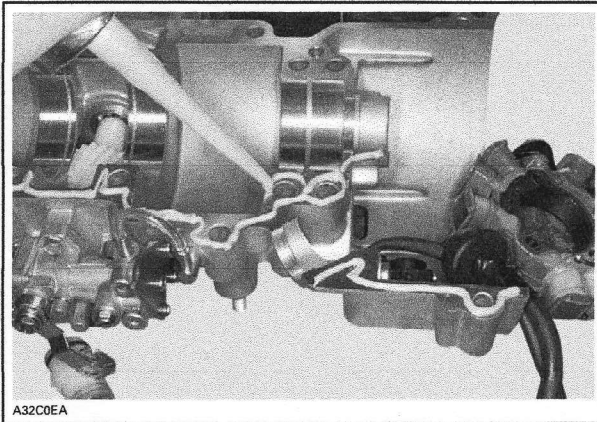
IMPORTANT: The total assembly sequence, including sealing compound spreading, screwing and torquing of bolts according to the proper sequence, must be performed within 10 minutes. **Do not wait between each bolt torquing. All bolts must be torqued in a row.**

Before screwing both parts of crankcase, seal it with sealing compound (P/N 420 297 906). Make sure surfaces are clean and degreased before applying sealing compound.

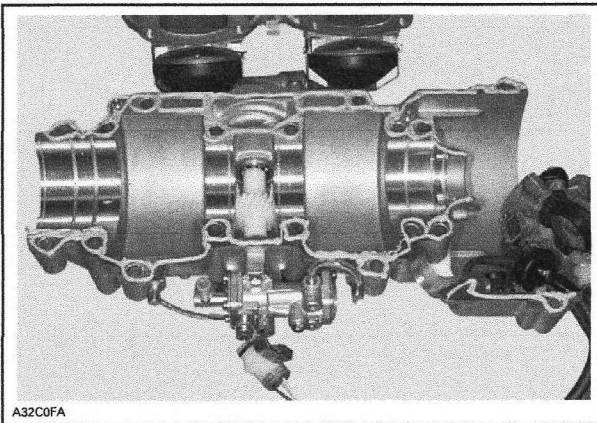
Section 04 ENGINE

Subsection 02 (593 HO AND 793 ENGINE TYPES)

Spread a seam of 1.2 mm (1/16 in) maximum in diameter on surface of lower crankcase half.

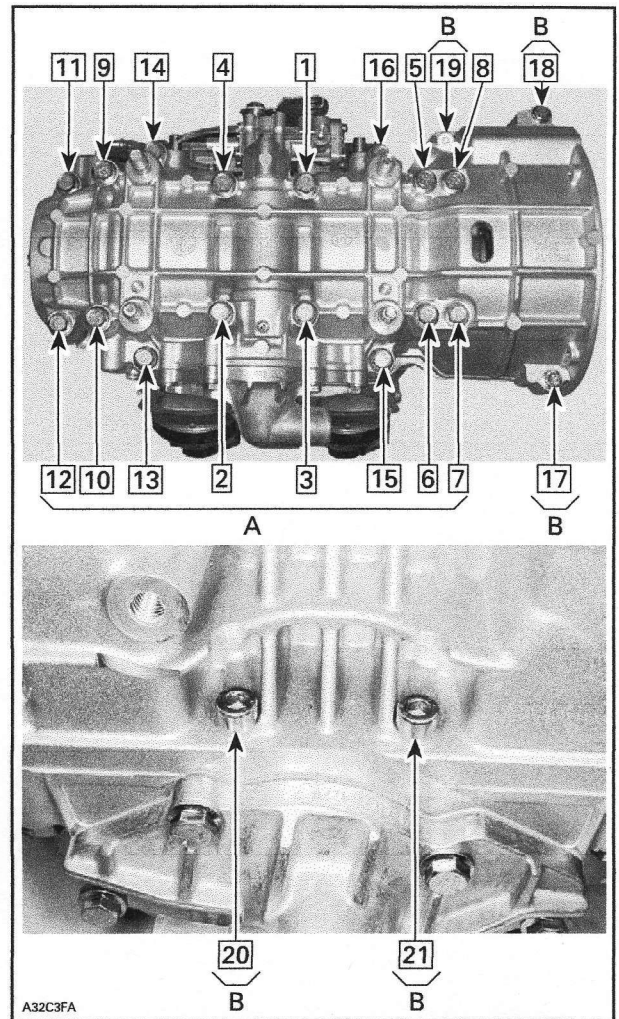


As far as possible, sealing compound must be applied in one run to avoid any risks of leakage through the crankcase.



SEAMING COMPLETED — CONTACT SURFACES COVERED AND SCREW HOLES SURROUNDED

Screw all crankcase bolts in place in the following sequence and to the appropriate torque; this must be done in two steps torquing: first, screw bolts up to 60% of the final torque (18 N•m (13.5 lbf•ft) for most of the bolts), then, tighten to the required torque (i.e. 29 N•m (21 lbf•ft)).



A. Torque bolts 1 through 16 to 29 N•m (21 lbf•ft)
B. Torque bolts 17 through 21 to 9 N•m (80 lbf•in)

BREAK-IN

After rebuilding an engine, always observe a break-in period as described in *Operator's Guide*.

NOTE: Carefully clean screws before reinstallation, specifically under screw head.

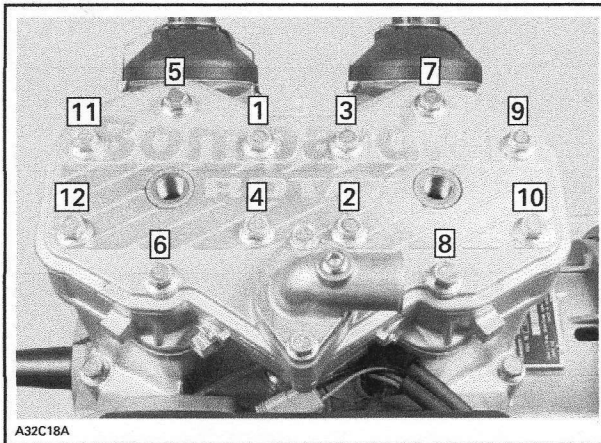
Install exhaust manifold with gaskets. Do not tighten yet.

Torque cylinder screws in a crisscross sequence as per the following table.

M8	29 N•m (21 lbf•ft)
M10	40 N•m (29 lbf•ft)

At assembly, torque cylinder head screws to 29 N•m (21 lbf•ft) in the following illustrated sequence.

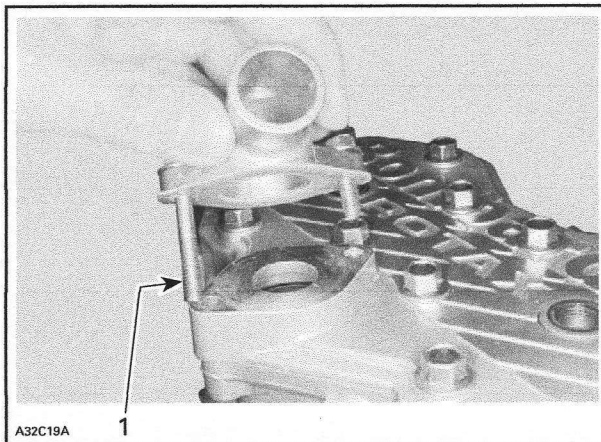
Tighten exhaust manifold bolts to 23 N•m (17 lbf•ft) in a criss-cross sequence.



A32C18A

TYPICAL

Apply Loctite 243 (P/N 293 800 060) on screws threads. Install outlet socket and tighten screws to 12 N•m (106 lbf•in). Note position of longer screw.



A32C19A

1. Longer screw

17, Reed Valve

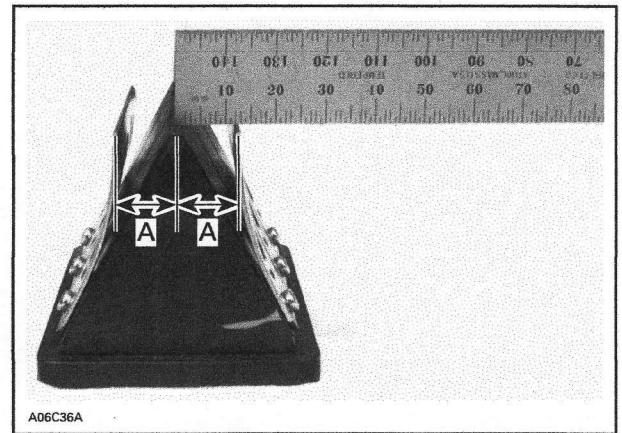
All Engines

Blades have a curved shape. Install with their curve facing reed block.

With blade stopper no. 16 removed, check reed valve for proper tightness. There must not be any play between blade and valve body when exerting a finger pressure on blade at blade stopper location.

In case of a play, turn blade upside down and recheck. If there is still a play, replace blade and/or valve body.

Check distance from blade stopper outer edge and distance from center of reed valve block.



A06C36A

TYPICAL

A. 18.7 - 0, + 0.75 mm (.736 - 0, + .030 in)

Bent blade stopper as required to obtain the proper distance.

Blade stoppers may slightly interfere with cylinder during installation. Adjusted distance will be reduced automatically upon installation.