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Water Pump (Industrial & Marine Engines) (SENR7410-04)

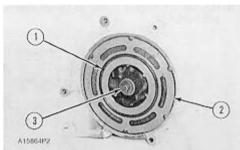
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Disassemble Water Pump (Industrial & Marine Engines)

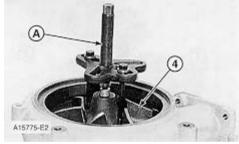
	Tools Needed	Α	В
8S2264	Pulier Group	1	1
120456	Drive Plate	1	4
4B3903	Bolt	2	
9M1974	Flat Washer	4	
1P2320	Puller Assembly		1
9S9155	Step Plate	7	1

Start By:

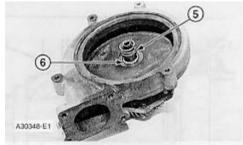
a. remove water pump



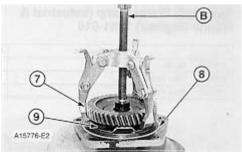
- 1. Remove O-ring seal (1) from adapter (2).
- 2. Remove adapter (2) with a screwdriver. Remove the seal from the edge of adapter (2).
- 3. Remove bolt (3) and washer.



4. Remove impeller (4) from the water pump housing with Tool (A).

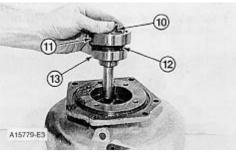


5. Remove seal assembly (5). Remove ring and seal (6).



- 6. Remove the bolt and washer that hold gear (7) on the water pump shaft.
- **7.** Remove gear (7) with Tool (B).
- 8. Remove bolts and retainer (9).
- **9.** Remove O-ring seal (8).

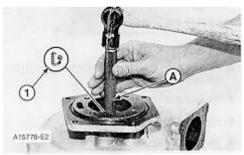
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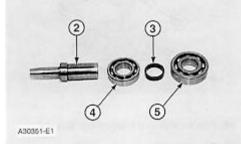
- 10. Remove shaft (10) and bearings as a unit.
- **11.** Remove bearing (11), spacer (12) and bearing (13) from shaft (10).
- **12.** Remove the lip type seal from the gear side of the water pump. Remove ring and seal from the impeller side of the water pump.

Assemble Water Pump (Industrial & Marine Engines)

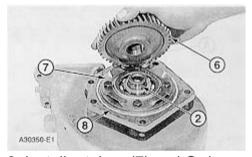
Tools Needed			A
1P0529	Handle	< /	1
1P0479	Drive Plate	7	1
1P0469	Drive Plate	10	1



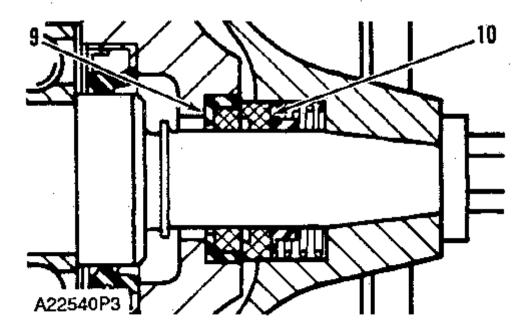
1. Put clean oil or glycerin on the lip of seal (1). Install seal (1) as shown with Tool (A)



billar Inc. 2. Install bearing (4), spacer (3) and bearing (5) on shaft (2). Install shaft (2) in the pump housing.

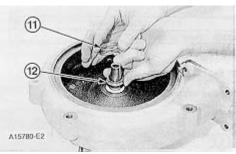


- **3.** Install retainer (7) and O-ring seal (8).
- **4.** Install gear (6). Install the washer and bolt that hold gear (6) to shaft (2).

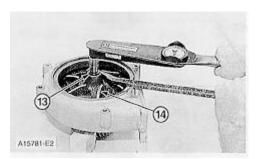


5. Put clean water on seal (9). Install seal (9) and ring (10) together in the housing bore with the shiny face of ring (10) toward the outside.

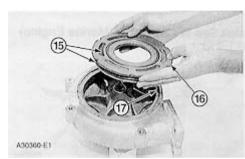
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6. Remove spring (11) from seal (12). Put clean water on the inside of seal (12). Push the seal on the shaft until the carbon face makes contact with the shiny face or ring (10). Install spring (11).



- 7. Install impeller (14) and the washer and nut (13) that hold the impeller to the pump shaft.
- 8. Tighten nut (13) to a torque of $39 \pm 1 \text{ N} \cdot \text{m}$ (28 \pm 1 lb ft).



- 9. Put clean engine oil or glycerin on O-ring seals (15). Install the O-ring seals on adapter (16).
- 10. Install adapter (16) in the pump housing with the notch in alignment with dowel (17)

End By:

a. install water pump

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