

# INSTALLATION GUIDELINES

## AAE NISSAN/INFINITI EHPS PUMP



### REPLACING NISSAN/INFINITI EHPS PUMP WITH AAE REMANUFACTURED UNIT

#### EHPS SYSTEM DESCRIPTION

- The EHPS pump assembly consists of reservoir tank, power steering oil pump, electric motor, and power steering control module
- According to Nissan the EHPS pump is not serviceable and should be replaced as an assembly

#### AAE PART NUMBERS

There are two different styles of pumps. The easiest way to tell the difference is the shape of the reservoir near the reservoir cap. Also notice the position of the high-pressure port and the specified torque from Nissan:

<table border="1"> <thead> <tr> <th>AAE Part No.</th> <th>OE Cross References</th> <th>Make/Model</th> </tr> </thead> <tbody> <tr> <td>HP1002</td> <td>491103TA7B</td> <td>Nissan Altima</td> </tr> <tr> <td>HP1004</td> <td>491103TA6C</td> <td>Nissan Altima</td> </tr> <tr> <td>HP1014</td> <td>491104RA5A</td> <td>Nissan Maxima</td> </tr> </tbody> </table>	AAE Part No.	OE Cross References	Make/Model	HP1002	491103TA7B	Nissan Altima	HP1004	491103TA6C	Nissan Altima	HP1014	491104RA5A	Nissan Maxima	<table border="1"> <thead> <tr> <th>AAE Part No.</th> <th>OE Cross References</th> <th>Make/Model</th> </tr> </thead> <tbody> <tr> <td>HP1012</td> <td>491105AA5D</td> <td>Nissan Murano</td> </tr> <tr> <td>HP1000</td> <td>491103KE5E</td> <td>Nissan Pathfinder</td> </tr> <tr> <td>HP1016</td> <td>491103JW5B</td> <td>Nissan Quest</td> </tr> <tr> <td>HP1033</td> <td>491103KA5E</td> <td>Infiniti QX60, JX35</td> </tr> <tr> <td>HP1001</td> <td>491109NE5B</td> <td>Nissan Pathfinder</td> </tr> <tr> <td>HP1034</td> <td>491109NC5B</td> <td>Infiniti QX60</td> </tr> </tbody> </table>	AAE Part No.	OE Cross References	Make/Model	HP1012	491105AA5D	Nissan Murano	HP1000	491103KE5E	Nissan Pathfinder	HP1016	491103JW5B	Nissan Quest	HP1033	491103KA5E	Infiniti QX60, JX35	HP1001	491109NE5B	Nissan Pathfinder	HP1034	491109NC5B	Infiniti QX60
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### TIPS

- Disconnect negative battery cable before removing EHPS pump
- Completely flush system to remove any debris which may cause subsequent failure
- Only use genuine Nissan E-PSF (Electric Power Steering Fluid) or equivalent
  - Nissan/Infiniti part number for the fluid is 999MP-EPF00P
- When replacing the EHPS pumps listed above no programming is required
  - If the hydraulic power steering gear is also replaced then the steering angle sensor needs to be calibrated using Nissan Consult
  - The steering angle sensor is located behind the steering wheel (not part of the EHPS pump)
- After installation always bleed air from power steering system

### TROUBLESHOOTING

There have been reports on several Nissan forums about pumps which make whining noise while operating. Even low mileage vehicles may exhibit that "issue". Keep in mind that the electro-hydraulic steering pump uses a high-rpm electric motor to provide hydraulic pressure to the power steering rack. These do not sound similar to traditional hydraulic power steering pumps.

According to Nissan: "Some normal operational sound may be heard from the front of the vehicle generated by the EHPS pump when the steering wheel is operated"

It may be difficult to determine if the noise is above normal but Nissan has issued TSBs (NTB13-017, NTB14-053, NTB16-023) which suggest checking several possible causes:

- Check fluid level with the ignition OFF and fluid temperature between 0 – 30°C (32 – 86°F)
- Make sure the right front hood ledge seal (passenger side) is installed correctly
- Make sure there is no binding on the EHPS pump mounting isolator
- Make sure the EHPS pump felt cover is installed correctly
- Make sure PS high pressure line and the A/C low pressure line are not touching each other
- Make sure the EHPS low pressure line is not touching the sub-frame near the front of the engine

#### Note:

When the steering wheel is operated repeatedly at low speed or turned to lock for a long period of time, the function of the EHPS pump becomes limited to prevent the system from overheating. The amount of assist may be reduced or removed but this is not a malfunction. Simply turn the engine off for a few minutes, so that the temperature of the pump can decrease and normal functionality should be restored.

*For Electric Power Steering related questions contact AAE Tech Support Hotline at 1-800-654-7565 (Press 2 for EPS)*

