

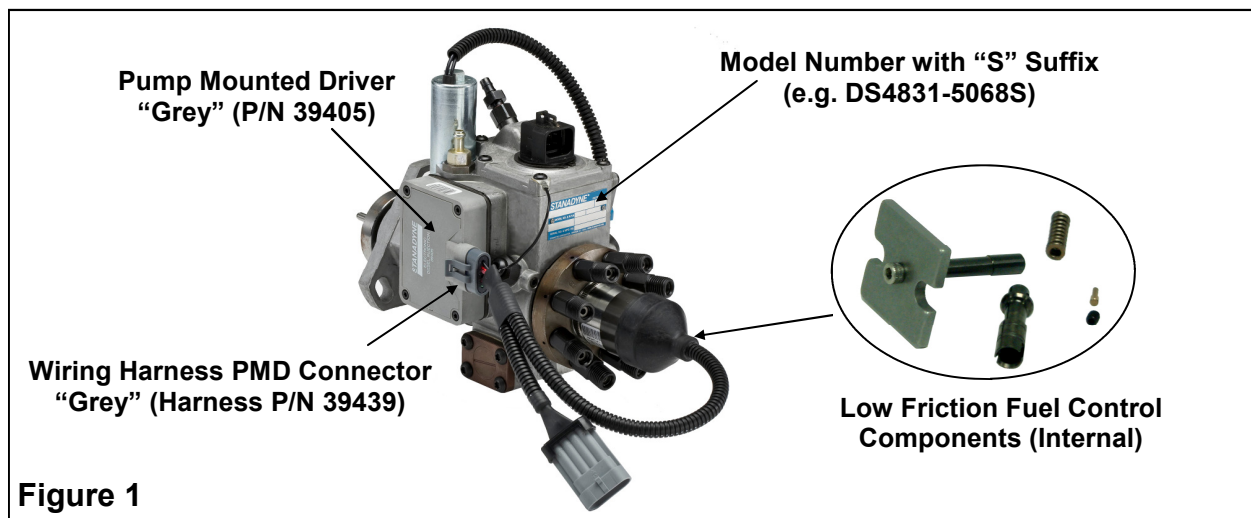
DATE: November 17, 2009

NO: 561R1

**SUBJECT: SERVICE PUMP MODELS FOR 6.5L ENGINES EQUIPPED WITH MODEL DS FUEL INJECTION PUMP**

**PUMP MODELS AFFECTED: DS4831-5521S & DS4831-5068S**

Stanadyne introduced two DS pump models (DS4831-5521S - GM P/N 12561307S and DS4831-5068S - GM P/N 17800076S) to supersede the DS-5068 and DS-5521 OEM pump models for service replacement. The new DS pump models are equipped with an enhanced pump mounted driver and “low friction” fuel control components. Calibration specifications remain the same as with previous models.



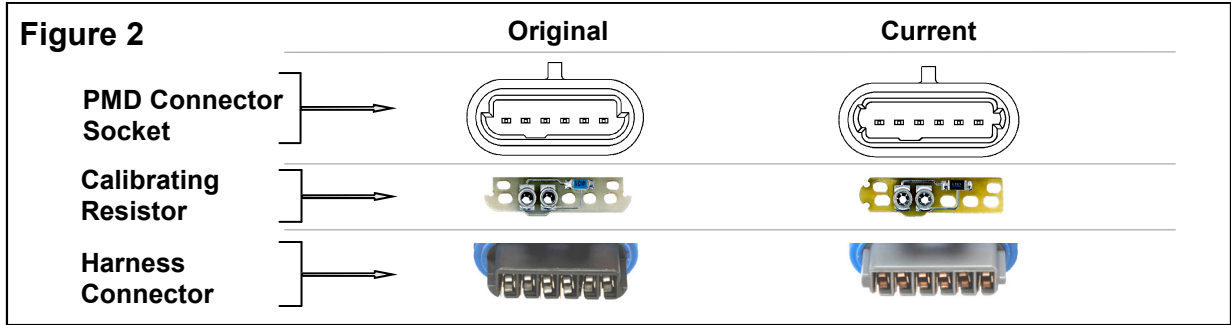
**Figure 1**

### **Pump Mounted Driver and Wiring Harness**

The pump mounted driver (PMD - P/N 39405) has been refined to include several internal components rated for higher temperature usage, a softer potting material for thermal expansion protection, mounting hole reinforcements to prevent circuit board stress, a “Grey” case color for easy identification. In addition both connector pins and respective wiring harness terminals are Gold plated for greater continuity

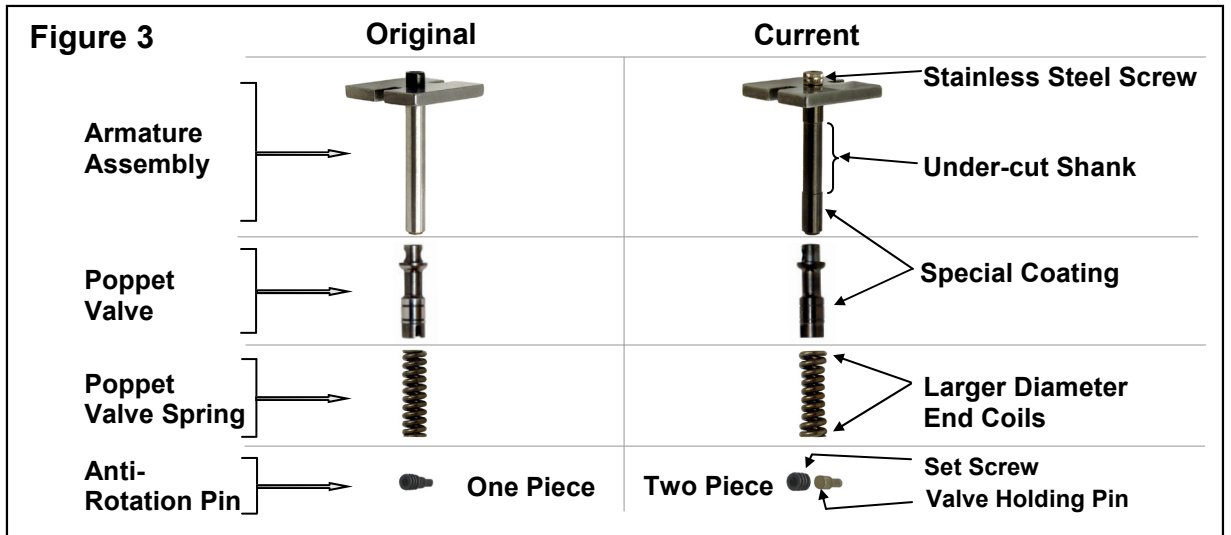
To prevent intermixing of Gold plated and non-plated wiring harness’s and PMD’s, the shape of the PMD connector socket, calibrating resistor and the respective wiring harness connector were changed as shown in Figure 2 on the following page.

*NOTE: A packet of dielectric lubricant (P/N 40568) is packaged with each PMD and wiring harness kit (P/N 35976) to prevent fretting corrosion and loss of continuity of electrical connections. The 40568 lubricant is available separately and can be used on all types of electrical connectors (e.g. PMD, engine connectors, E.S.O., etc.).*



### Low Friction Fuel Control Components

Originally introduced on DE pump models (Ref. S.B. 556), this design has proven to reduce friction and improve fuel control operation. As such, DS pump models are now equipped with these superior components (Figure 3): a specially coated poppet valve; re-designed armature assembly and poppet valve spring and also a wear resistant anti-rotation pin (Ref. S.B.514R).



### Armature Assembly

The low friction armature assembly (P/N 39479) is similar to the one currently used in DE pump models (P/N 36165). However, the DE & DS pump models have different fuel control solenoids, solenoid covers and armature plates rendering them non-interchangeable.

The low friction armature assembly is distinguished from the original armature assembly by the stainless steel screw, special coating on the armature pin and an under-cut on the shank to minimize the amount of surface area exposed to friction.

### Poppet Valve, Poppet Valve Spring and Anti-Rotation Pin

Having the same special coating as the armature pin, the low friction poppet valves (Ref. P.B. 198R) are easily distinguishable from earlier poppet valves by

their blackened appearance (Figure 3). The poppet valve spring has larger diameter coils on each end for self centering and the prevention of coil binding. The anti-rotation pin (Ref. S.B. 514R) is a wear resistant two piece design for improved wear characteristics.

**Service**

Service procedures and calibration routines are the same as the OEM equivalent pump models (DS-5521, DS-5068). Low friction fuel control parts kits are available for use in all DS pump models. The parts kits are based on poppet valve size (Ref. S.B. 198R) and are favorably priced as a cost effective up-grade for earlier DS pump models.

**Low Friction Fuel Control Parts Kits  
for DS Pump Models**

<b>Kit P/N</b>	<b>Poppet Valve P/N</b>	<b>Poppet Valve Size (Ref. P.B. 198)</b>	<b>Kit P/N</b>	<b>Poppet Valve P/N</b>	<b>Poppet Valve Size (Ref. P.B. 198)</b>
40210	36164	A	40214	36168	E
40211	36165	B	40215	36169	F
40212	36166	C	40216	36170	X
40213	36167	D	40217	36171	H

<b>Parts Kits Include:</b>	<b>Part Number</b>
Armature Assembly	39479
Anti-rotation Pin & Screw	36146
Poppet Valve	See Table Above
Poppet Valve Spring	36155

**Warranty**

The warranty coverage for the new DS pump models is two years, unlimited miles (Ref. S.L. 328). Other specific warrantable conditions are found in section 4 of the Stanadyne Policies and Procedures Manual (99666) located on the Stanadyne service website.

**Technical Support Group  
Product Support Department**

**Revision   Date   Changes**

1	11/09	Added Information on Dielectric Connector Lubricant and Low Friction Fuel Control Parts Kits
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