

## COMPLAINT

SECONDARY COMPLAINT

## Insufficient line rise, 3-4 clutch failure

- Poor shift quality

## CAUSE

A worn boost sleeve can allow torque signal and reverse oil cross leakage to sump.

## CORRECTION

These closely tolerated valve and sleeve kits restore hydraulic integrity and prevent leakage. Kits are available in the .470" stock replacement or .490" increased boost ratio sizes.

## "Factory Style" Reverse Boost Valve & Sleeve Kits

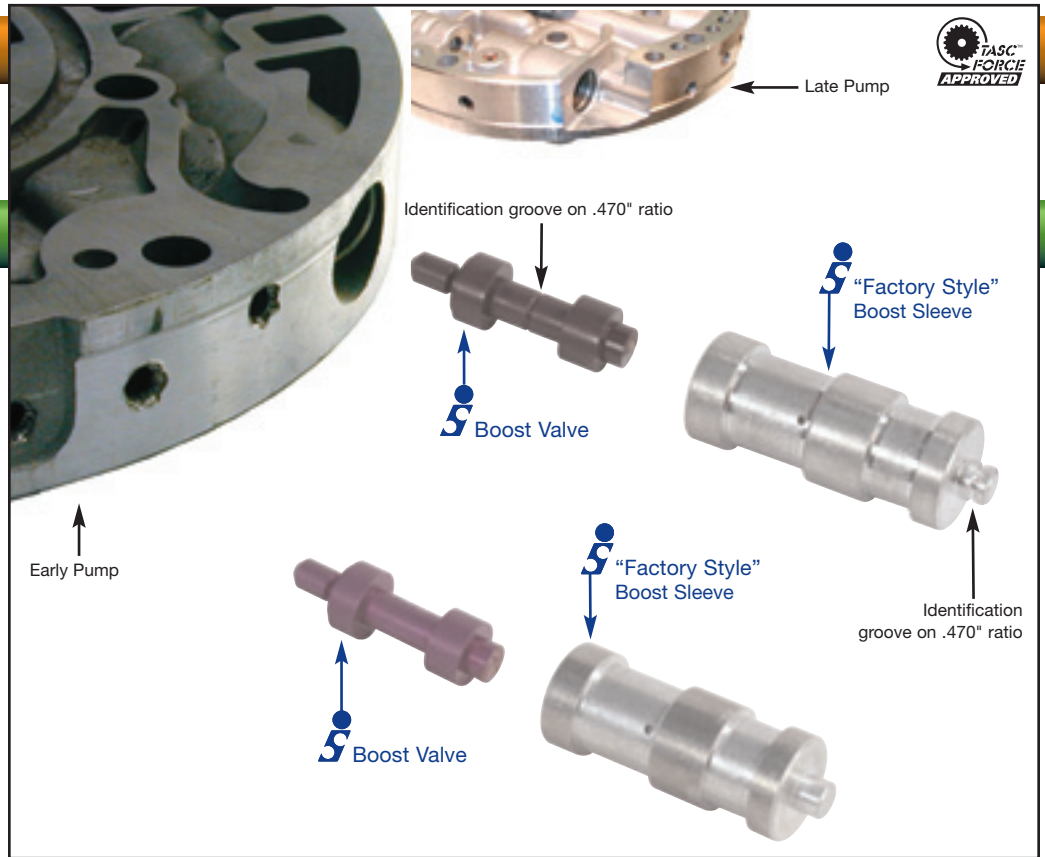
**77898E-3K** Oversized  
.490" EPC spool diameter for early pumps

**77898E-6K** OEM Ratio  
.470" EPC spool diameter for early pumps

Each includes the following

- 1 Boost Valve
- 1 Boost Sleeve

**Note:** U.S. Patent No. 6,619,323



### Sonnax Part Summary

Vehicles with a 4L60-E transmission frequently have poor line rise, which can result in 3-4 clutch, 2-4 band failure or poor shift quality. The duty cycle of the EPC solenoid causes the boost sleeve to wear quickly. Oil entering the torque signal orifice leaks past the boost valve and exhausts at the reverse orifice, resulting in poor line rise. Reverse oil can exhaust both to the sump and back through the torque signal orifice. Sonnax offers two "factory style" replacement boost valve kits that will prevent the above problems: **77898E-6K** with an OEM boost ratio (.470" EPC spool diameter), and **77898E-3K** with increased spool diameters (.490" EPC spool diameter).

PUMP DESIGN	OEM		SONNAX WITH O-RINGS		SONNAX "FACTORY" STYLE	
	VALVE	SLEEVE	VALVE	SLEEVE	VALVE	SLEEVE
1.907" LONG SLEEVE	EARLY DESIGN	1 BAND .421" EPC	NO END GROOVE			
	EARLY DESIGN	2 BANDS .470" EPC	1 END GROOVE	1 GROOVE .470" EPC 77898E-4K	1 GROOVE NUB END .470" EPC 77898E-6K	1 GROOVE NUB END
	EARLY DESIGN	INCREASED RATIO VERSION OEM REPLACEMENT .470"		NO GROOVE .490" EPC 77898E-K	NO GROOVE .490" EPC 77898E-3K	NO GROOVE
1.810" SHORT SLEEVE	LATE DESIGN	3 BANDS .421" EPC	NO END GROOVE			
	LATE DESIGN	4 BANDS .470" EPC	1 END GROOVE			
	LATE DESIGN	INCREASED RATIO VERSION OEM REPLACEMENT .470"		2 GROOVES .490" EPC 77898E-7K	2 GROOVES ON PR END	

