FORD E4OD

CHECK BALL LOCATIONS , EARLY 89 - 1994
ACCUMULATOR FILTER ASSEMBLY LOCATION
AND CHECK BALL FUNCTIONS

EARLY 1989 MODELS:
Valve Body check ball locations are shown in Figure 1. This model uses 14 rubber check balls in the case, and the EPC Relief Ball and Spring as shown in Figure 2. Check ball function and usage chart are shown on Page 5.

LATE 1989 MODELS:
Valve Body check ball locations are shown in Figure 1. This model uses 10 rubber check balls, and one 5/16" steel check ball in the case, and the EPC Relief Ball and Spring as shown in Figure 3. Check ball function and usage chart are shown on Page 5.

1990-1994 MODELS:
Valve Body check ball locations are shown in Figure 1. These models use 9 rubber check balls in the case, and the EPC Relief Ball and Spring as shown in Figure 4. Check ball function and usage chart are shown on Page 5. 1991-1994 models also use an intermediate accumulator regulator filter assembly in the case, located in the position shown in Figure 4.

VALVE BODY CHECKBALL LOCATIONS
2 RUBBER BALLS - ALL MODELS

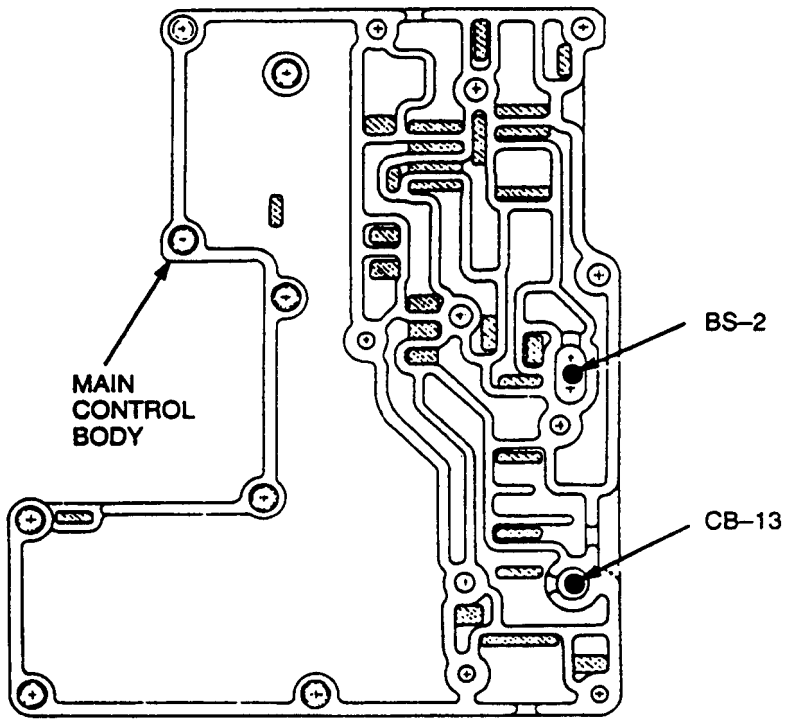
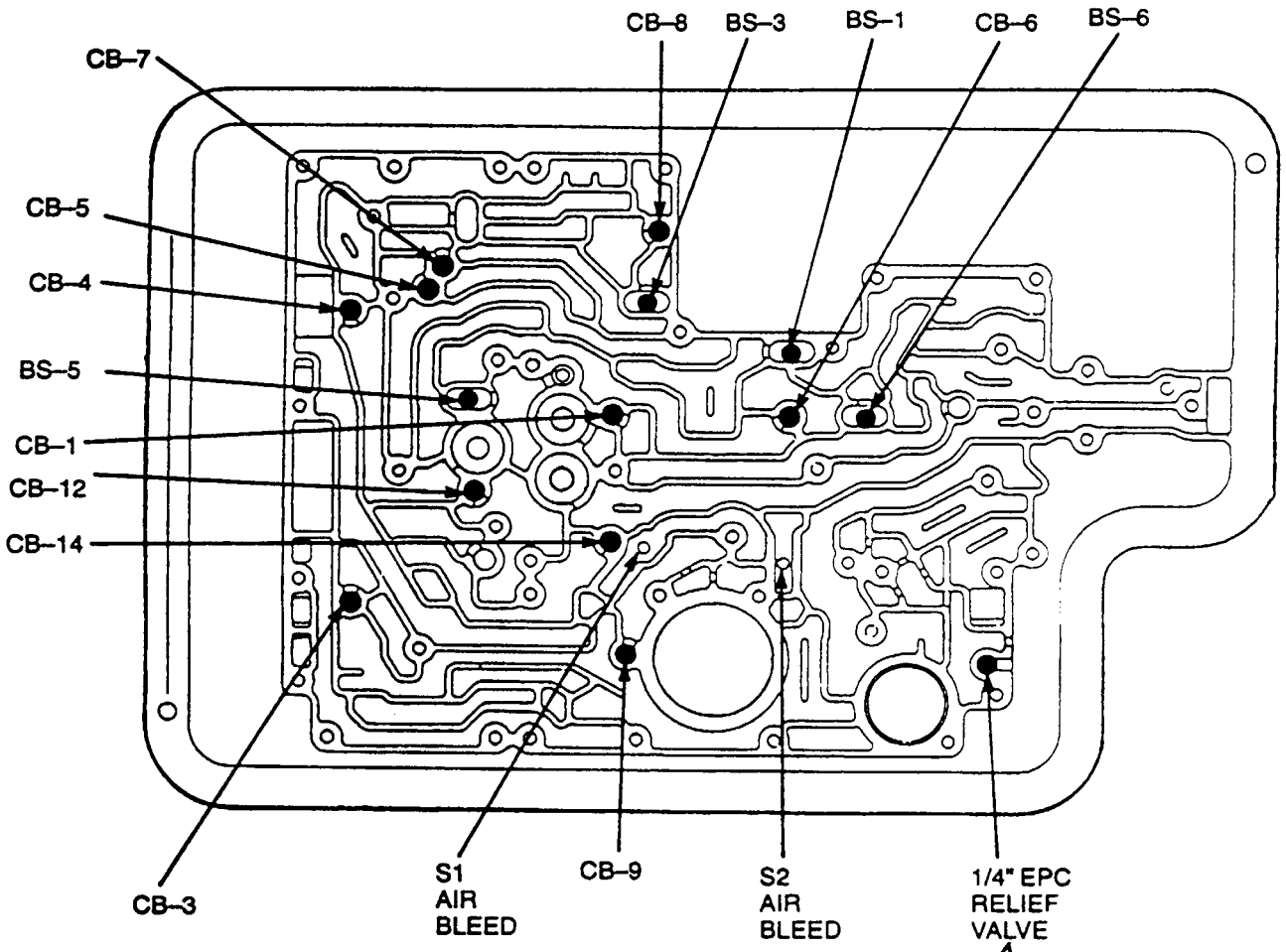


Figure 1

EARLY 1989 LOCATIONS
14 RUBBER BALLS IN THE CASE



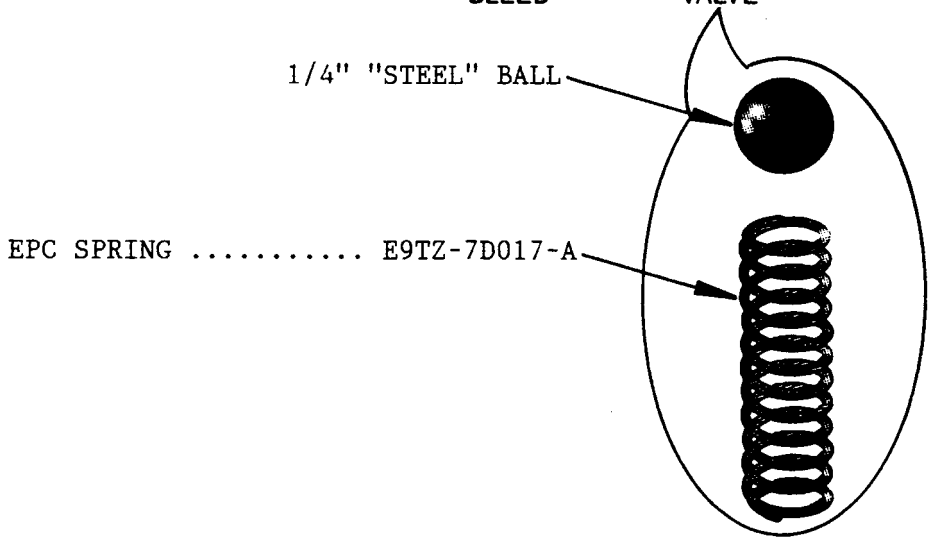
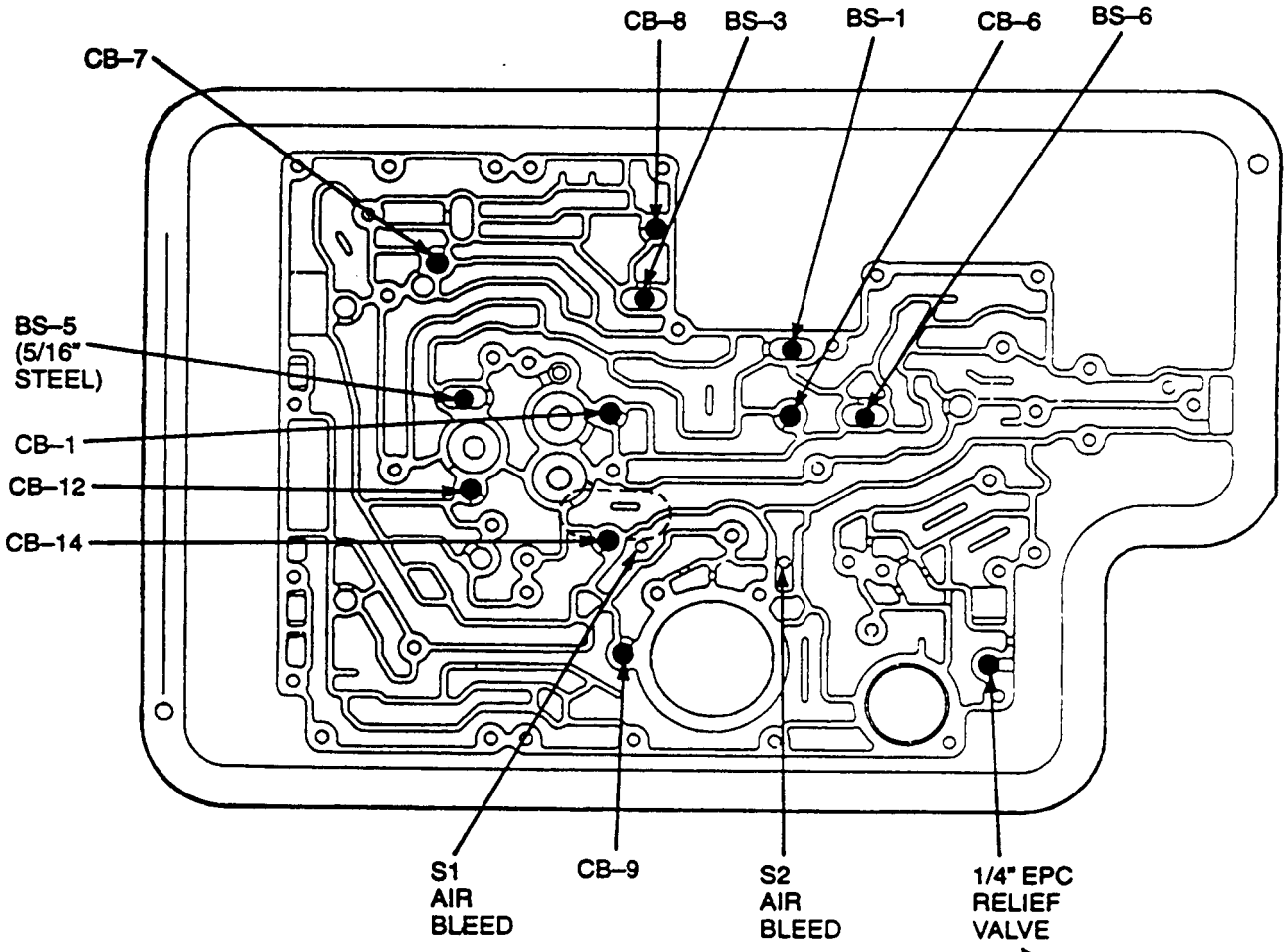


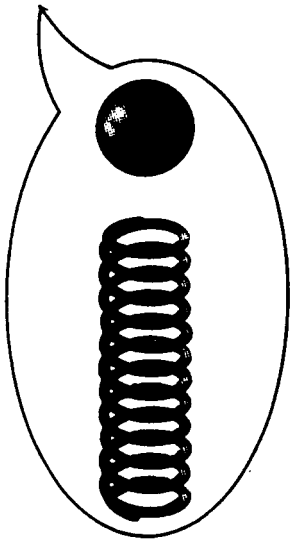
Figure 2

LATE 1989 LOCATIONS
10 RUBBER BALLS AND ONE
5/16 STEEL BALL IN THE CASE



1/4" "STEEL" BALL

EPC SPRING E9TZ-7D017-A



SPRING GOES INTO
THE CASE FIRST.
(USED ALL MODELS)

Figure 3

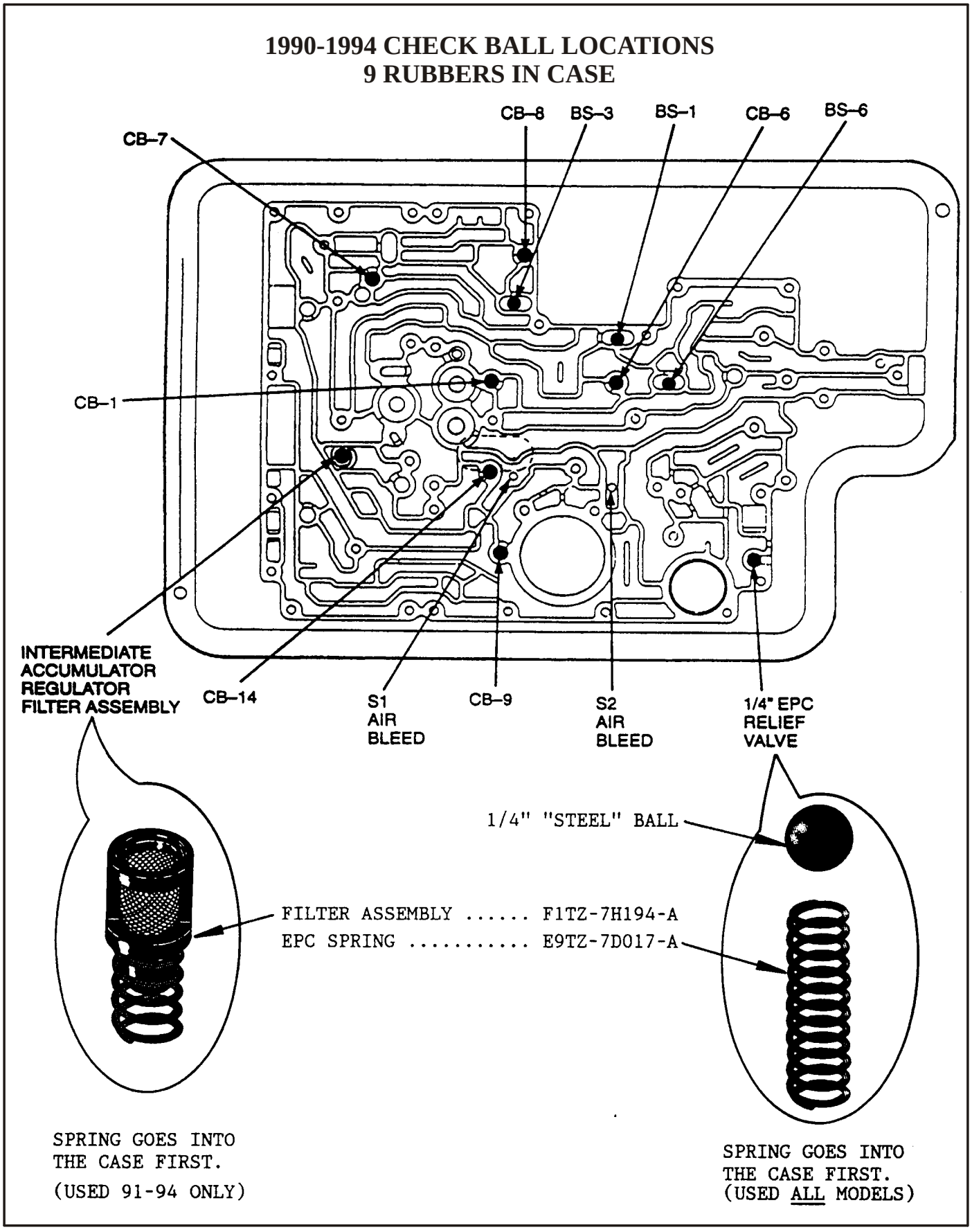

1990-1994 CHECK BALL LOCATIONS
9 RUBBERS IN CASE
CB–8
BS–3
BS–1
CB–6
BS–6
CB–7
CB–1
INTERMEDIATE ACCUMULATOR REGULATOR FILTER ASSEMBLY
CB–14
S1 AIR BLEED
CB–9
S2 AIR BLEED
1/4" EPC RELIEF VALVE
1/4" "STEEL" BALL
FILTER ASSEMBLY F1TZ-7H194-A
EPC SPRING E9TZ-7D017-A
SPRING GOES INTO THE CASE FIRST. (USED 91-94 ONLY)
SPRING GOES INTO THE CASE FIRST. (USED ALL MODELS)

Figure 4

CB–1: Feeds reverse flow through 4–3–2 shift timing valve.

CB–3: Bypasses intermediate accumulator plunger feed orifice during 2–1.

CB–4: Bypasses overdrive accumulator plunger feed orifice during 4–3.

CB–5: Bypasses direct accumulator plunger feed orifice during 3–2.

CB–6: Forces direct clutch to exhaust through orifice during 3–2 downshift.

CB–7: Forces overdrive clutch to exhaust through orifice during 4–3 downshift.

CB–8: Forces coast clutch feed fluid through orifice for 4–3 downshift and manual 1 or 2 pull–ins while allowing free exhaust.

CB–9: Forces band servo apply pressure through orifice while bypassing the orifice on exhaust.

CB–12: Facilitates fast exhaust of direct clutch when coming out of reverse.

CB–13: (Main Control Body) Forces forward engagement pressure through orifice while allowing free exhaust.

CB–14: Forces intermediate clutch to exhaust through orifice during 2–1 downshift.

BS–1: Separates manual two flow and reverse flow to the 4–3–2 timing valve and the coast clutch shift valve.

BS–2: (Main Control Body) Separates manual two flow and solenoid two flow into the 1–2 manual transition valve which supplies flow to prevent 1–2 shift valve from shifting.

BS–3: Separates solenoid four flow from either the manual two flow or the reverse flow which shifts the coast clutch shift valve.

BS–5: Separates reverse flow and direct clutch accumulator flow into the direct clutch.

BS–6: Separate two and reverse flow at low reverse modulator valve.

USAGE CHART		
EARLY 89	LATE 89	90-94
X (CASE)	X (CASE)	X (CASE)
X (CASE)		
X (CASE)		
X (CASE)		
X (CASE)	X (CASE)	X (CASE)
X (CASE)	X (CASE)	X (CASE)
X (CASE)	X (CASE)	X (CASE)
X (CASE)	X (CASE)	X (CASE)
X (CASE)	X (CASE)	
X (V.B.)	X (V.B.)	X (V.B.)
X (CASE)	X (CASE)	X (CASE)
X (CASE)	X (CASE)	X (CASE)
X (V.B.)	X (V.B.)	X (V.B.
X (CASE)	X (CASE)	X (CASE)
X (CASE)	X (CASE)	
X (CASE)	X (CASE)	X (CASE)

EPC RELIEF VALVE
(SPRING AND 1/4" STEEL BALL)

Electronic Pressure Control blowoff valve controls EPC pressure to a maximum of 690 kPa (100 psi).

AIR BLEED BALL CAPSULES

Solenoid 1, Solenoid 2 and electronic pressure hydraulic circuits have air bleed check balls. Their purpose is to rid the circuits of air and ensure an immediate response at startup. The S1 and S2 air bleeds are located in the transmission case. The EPC air bleed is located in the pump control body.