



A442F

AUTOMATIC TRANSMISSION

HYDRAULIC CIRCUIT DIAGRAMS

Sep., 1992

Applicable models: FZJ80 Series
HDJ80 Series

For service specifications and repair procedure of the above models, refer to the following manual.

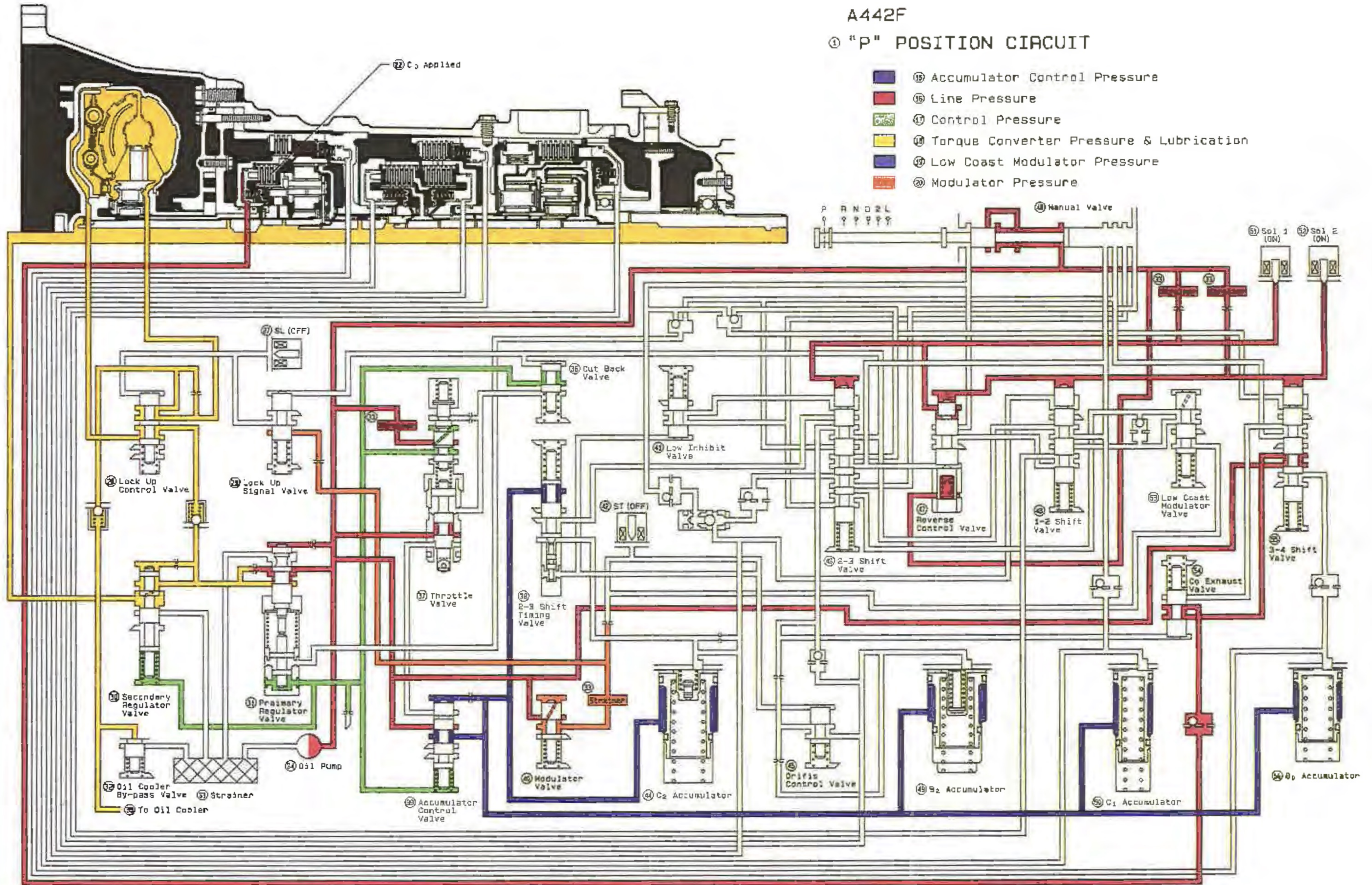
Destination	Manual Name	Pub. No.
General, Europe and Australia	• Land Cruiser (Hardtop, Canvastop and Station Wagon) Chassis and Body Repair Manual Supplement	RM315E
	• A442F Automatic Transmission Repair Manual	RM314E

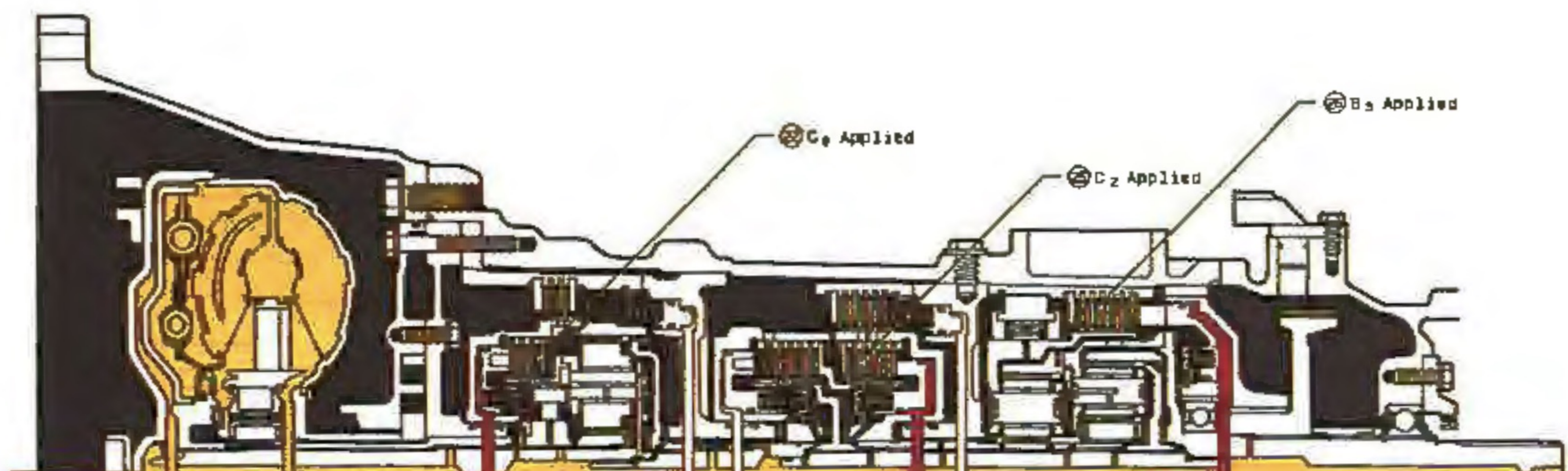
Limitation on Distribution and Use: Limited to Distributors and Dealers.

These diagrams are based on the latest product information at the time of publication. However, the contents are subject to change without notice.

A442F

① "P" POSITION CIRCUIT

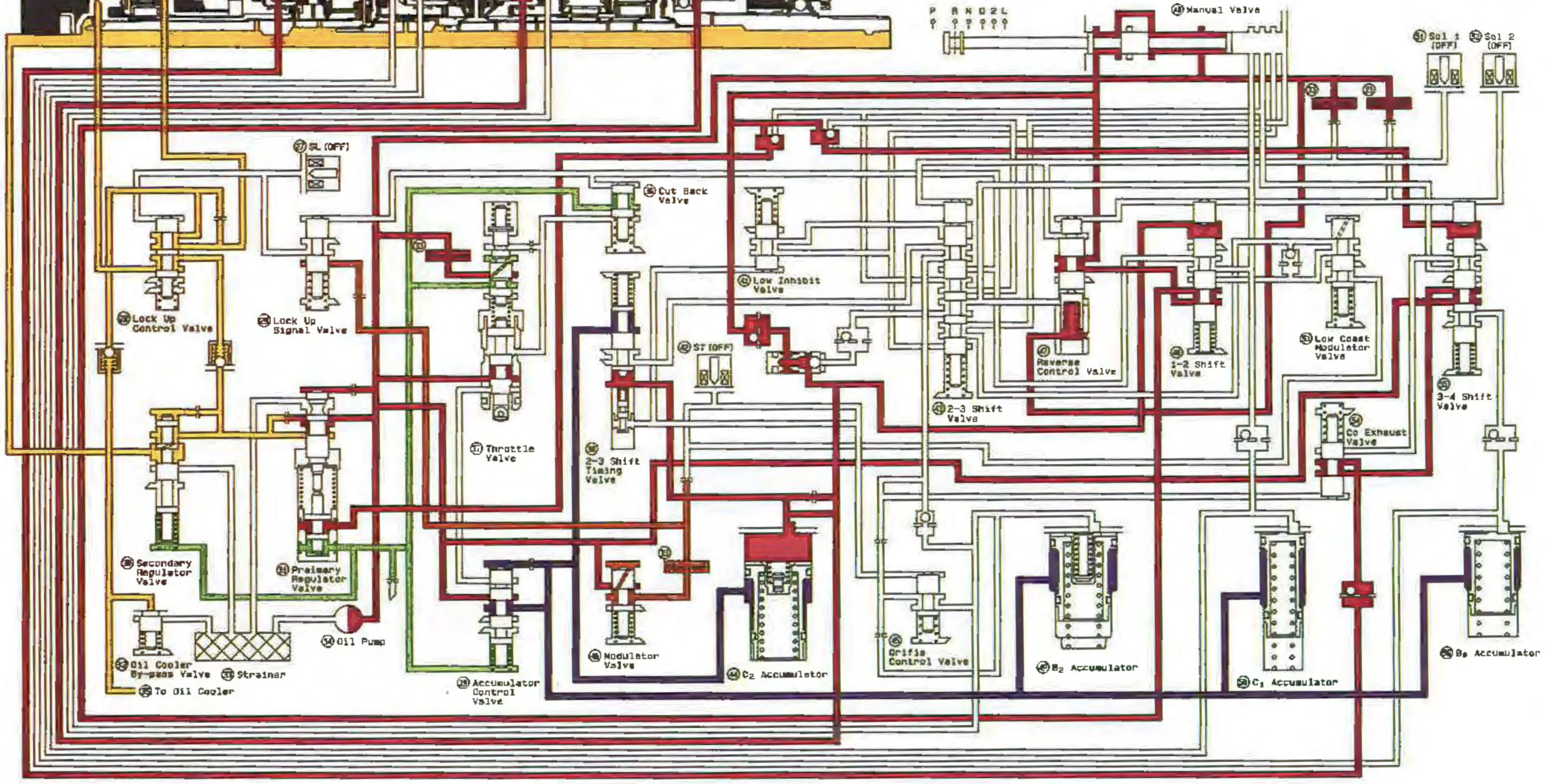




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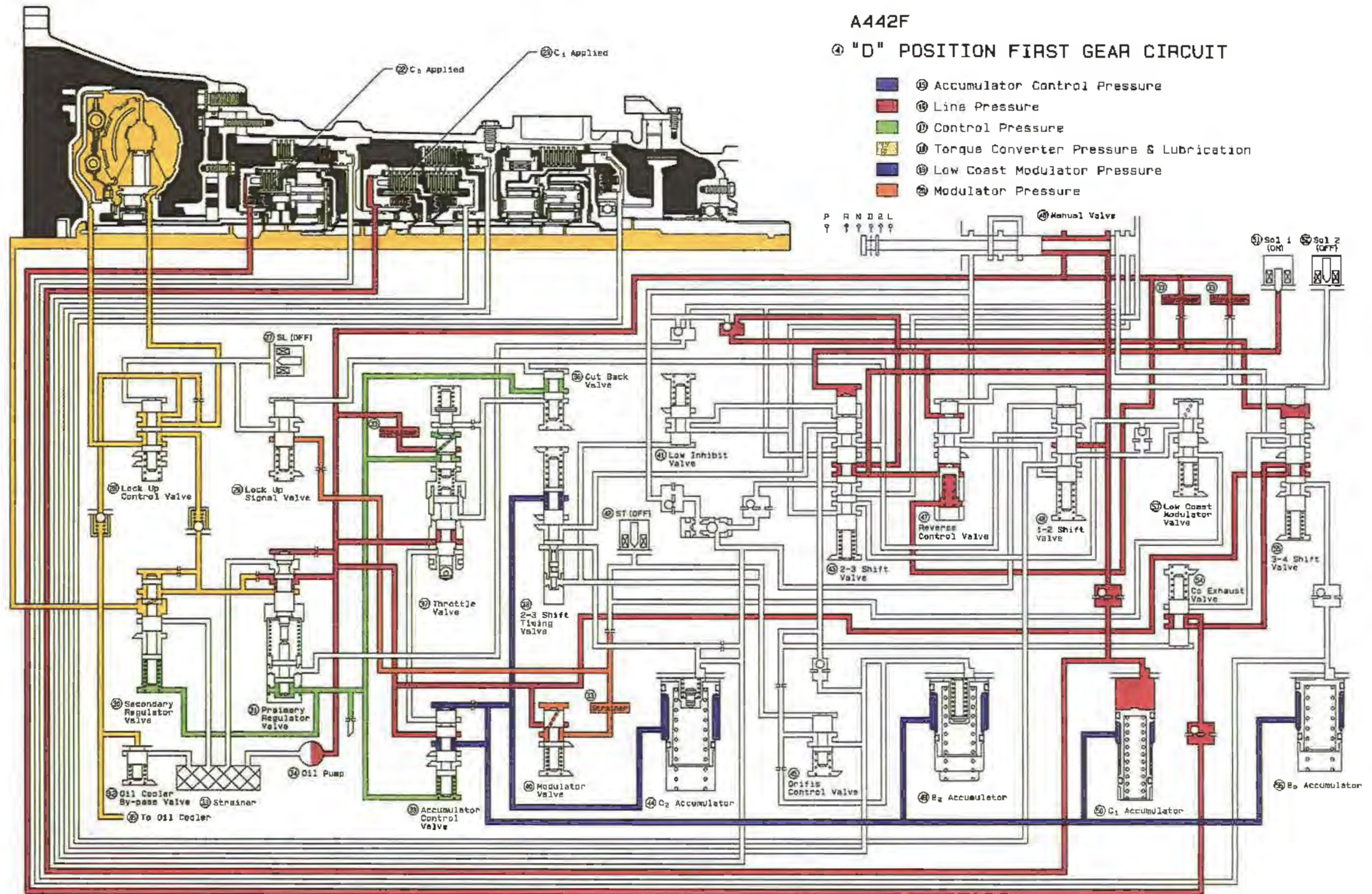
② "R" POSITION CIRCUIT

- ⑤ Accumulator Control Pressure
- ⑩ Line Pressure
- ⑪ Control Pressure
- ⑭ Torque Converter Pressure & Lubrication
- ⑮ Low Coast Modulator Pressure
- ⑯ Modulator Pressure



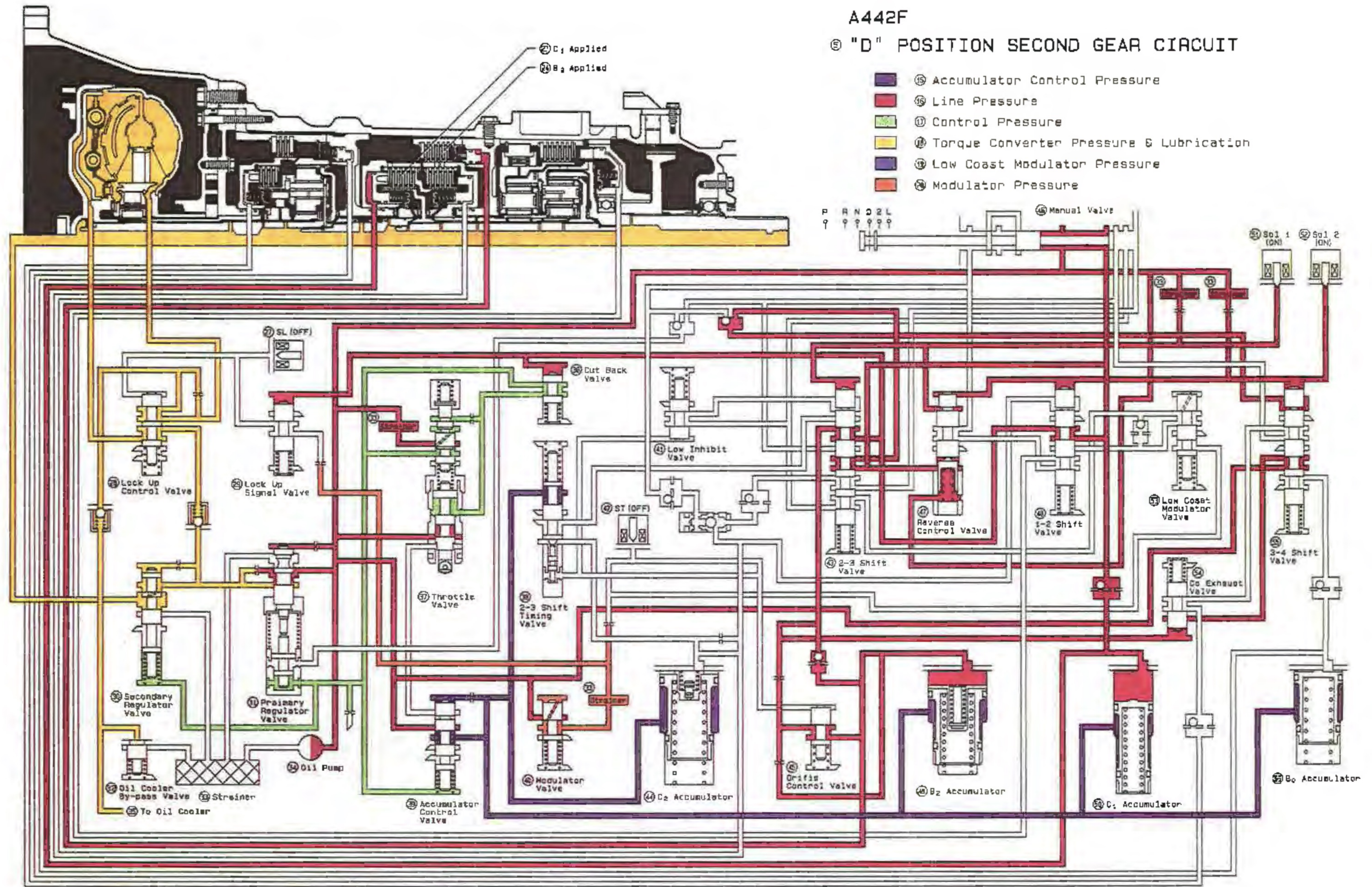
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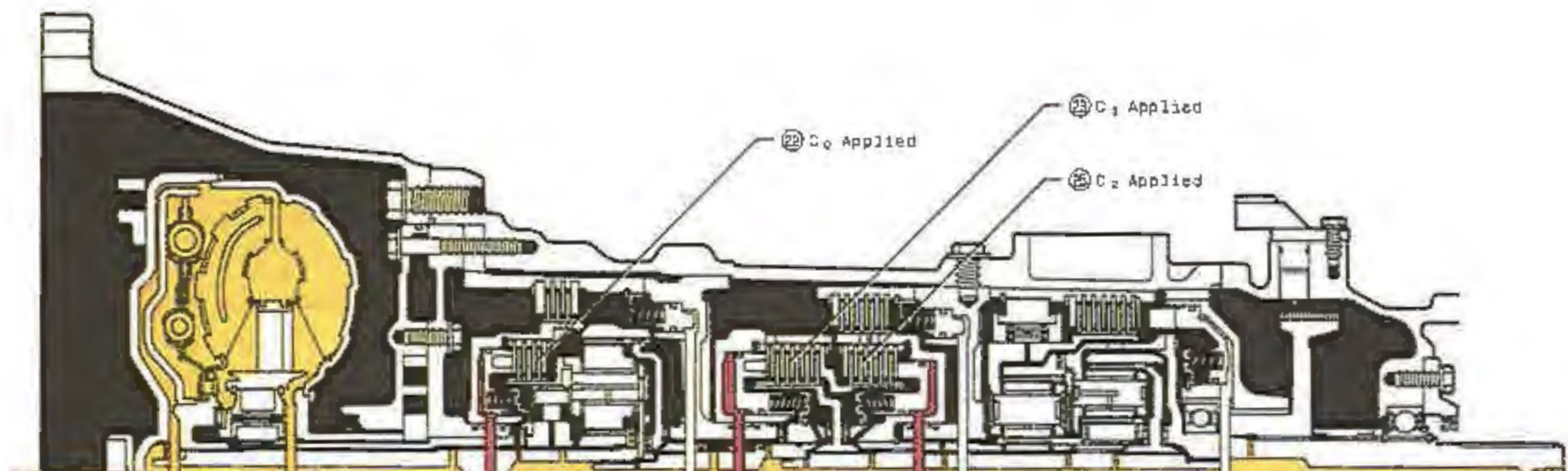
④ "D" POSITION FIRST GEAR CIRCUIT



A442F

⑤ "D" POSITION SECOND GEAR CIRCUIT

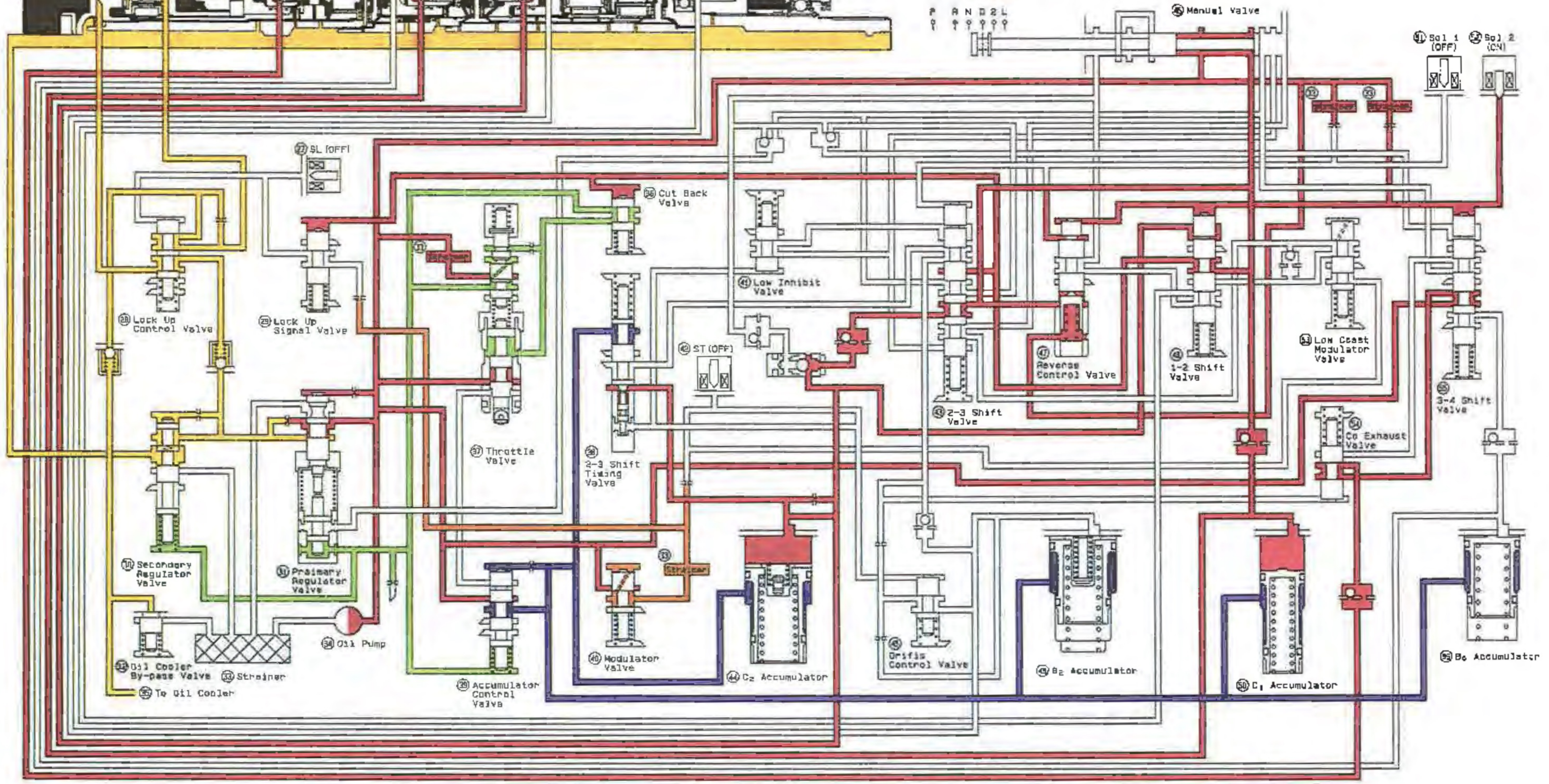




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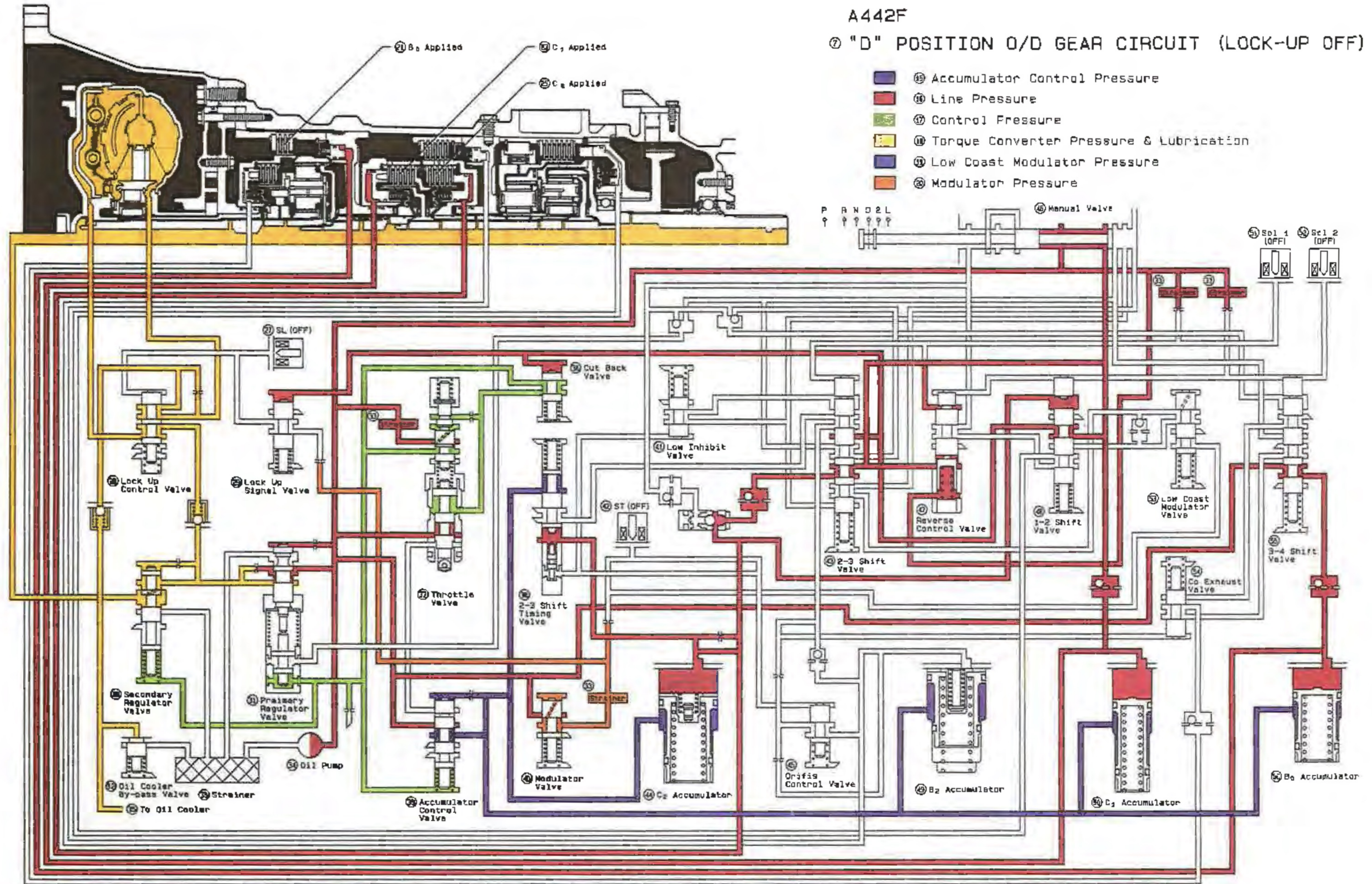
⑥ "D" POSITION THIRD GEAR CIRCUIT

- ⑬ Accumulator Control Pressure
- ⑭ Line Pressure
- ⑮ Control Pressure
- ⑯ Torque Converter Pressure & Lubrication
- ⑰ Low Coast Modulator Pressure
- ⑱ Modulator Pressure



A442F

⑦ "D" POSITION O/D GEAR CIRCUIT (LOCK-UP OFF)



- ⑤ Accumulator Control Pressure
- ⑥ Line Pressure
- ⑦ Control Pressure
- ⑧ Torque Converter Pressure & Lubrication
- ⑨ Low Coast Modulator Pressure
- ⑩ Modulator Pressure

P R N D 2 L
 9 9 9 9 9 9

④ Manual Valve

⑤ Sol 1 (OFF)
 ⑥ Sol 2 (OFF)

② Lock Up Control Valve

③ Lock Up Signal Valve

⑦ SL (OFF)

⑧ Cut Back Valve

⑨ Low Inhibit Valve

⑩ ST (OFF)

⑪ Reverse Control Valve

⑫ 1-2 Shift Valve

⑬ Low Coast Modulator Valve

⑭ 3-4 Shift Valve

⑮ Secondary Regulator Valve

⑯ Primary Regulator Valve

⑰ Oil Pump

⑱ Oil Cooler By-pass Valve
 ⑲ Strainer
 ⑲ To Oil Cooler

⑳ Accumulator Control Valve

㉑ Modulator Valve

㉒ C₂ Accumulator

㉓ Orific Control Valve

㉔ B₂ Accumulator

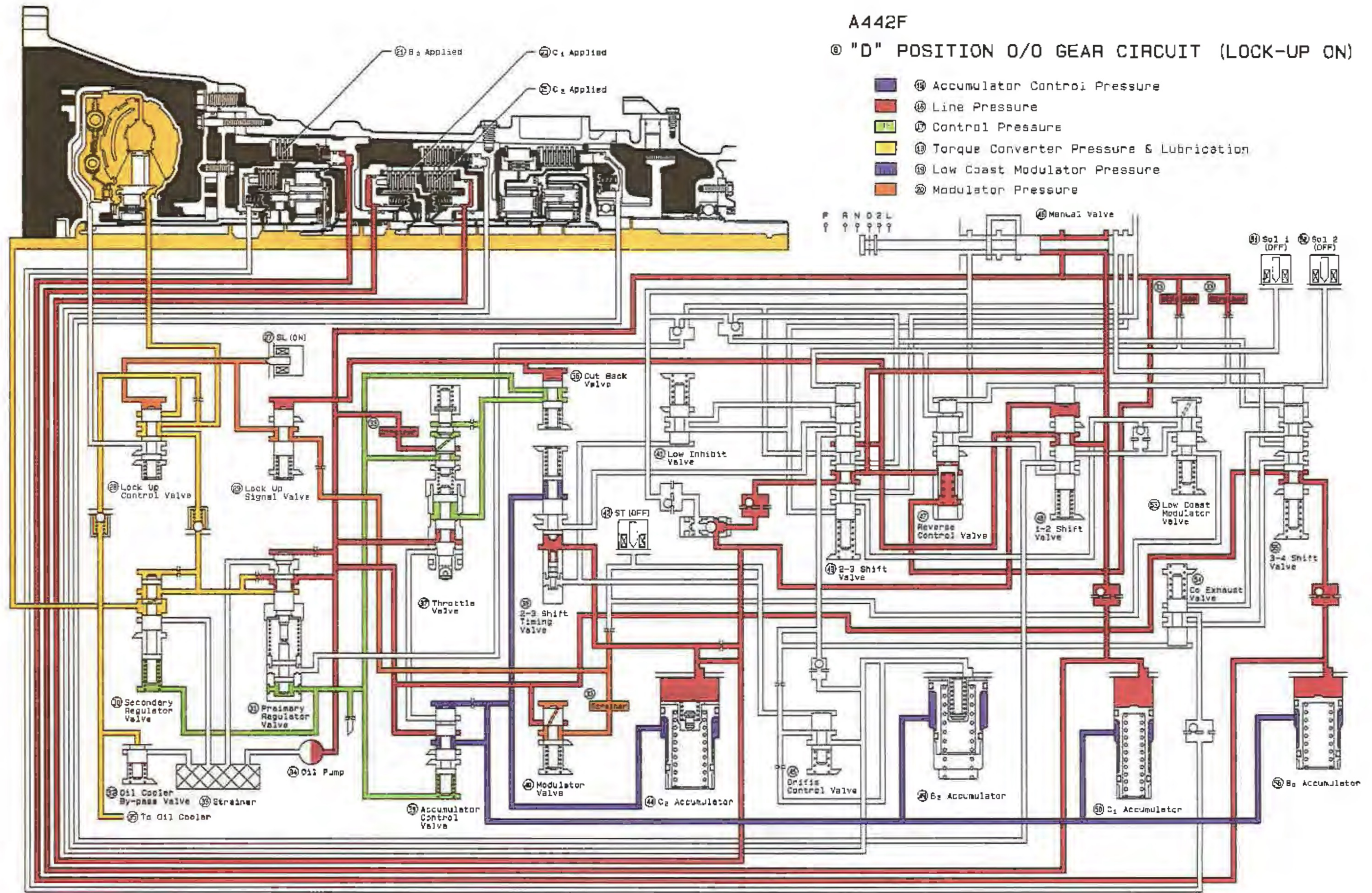
㉕ C₁ Accumulator

㉖ B₀ Accumulator

㉗ Co Exhaust Valve

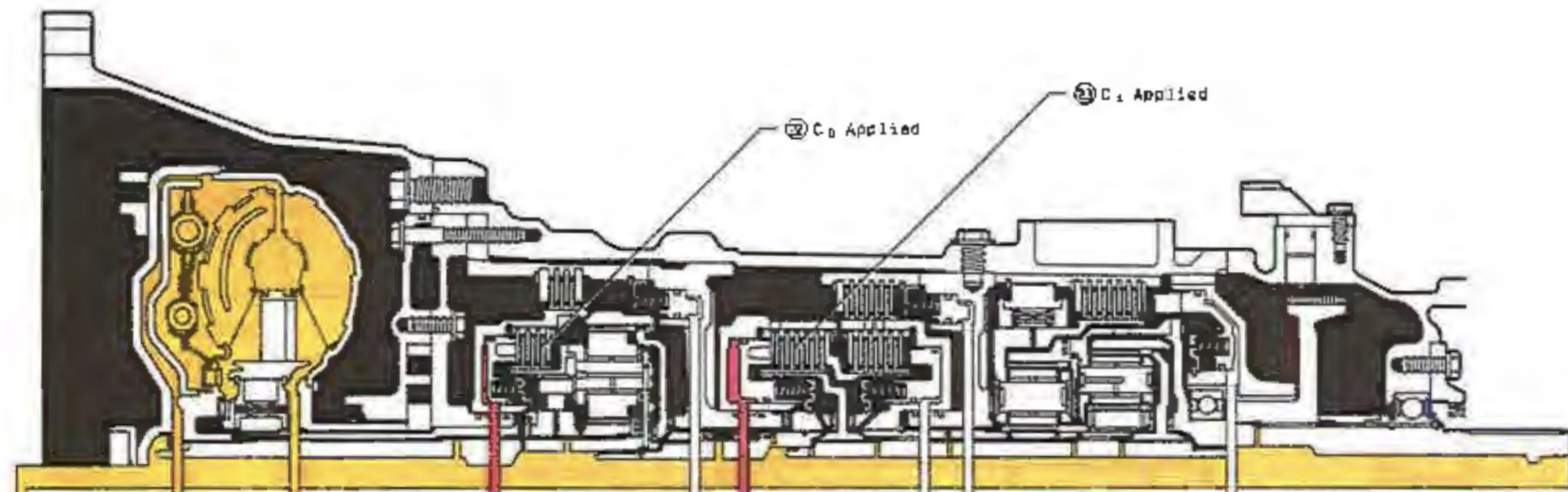
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⑥ "D" POSITION O/O GEAR CIRCUIT (LOCK-UP ON)

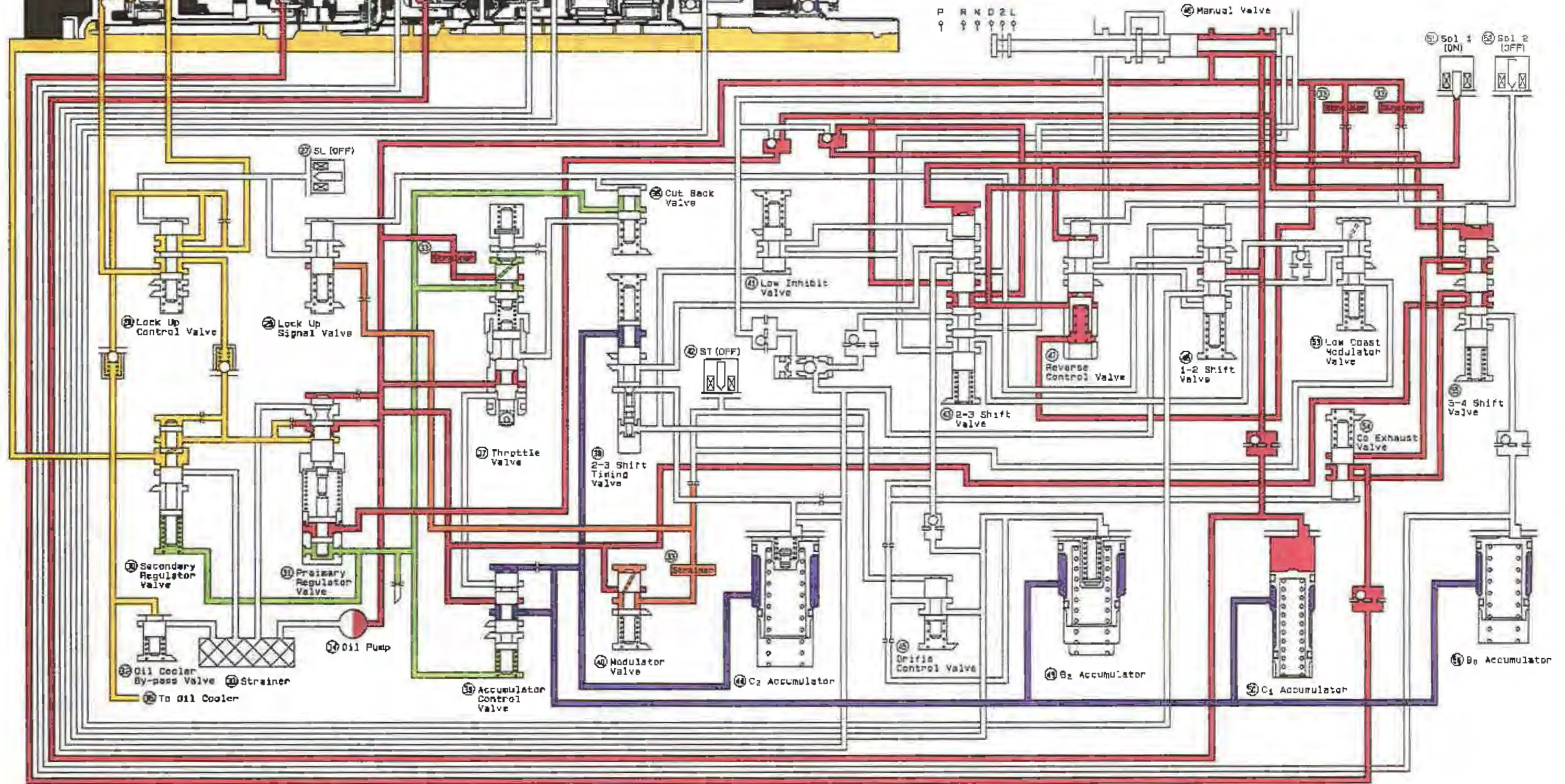


A442F

③ "2" POSITION FIRST GEAR CIRCUIT

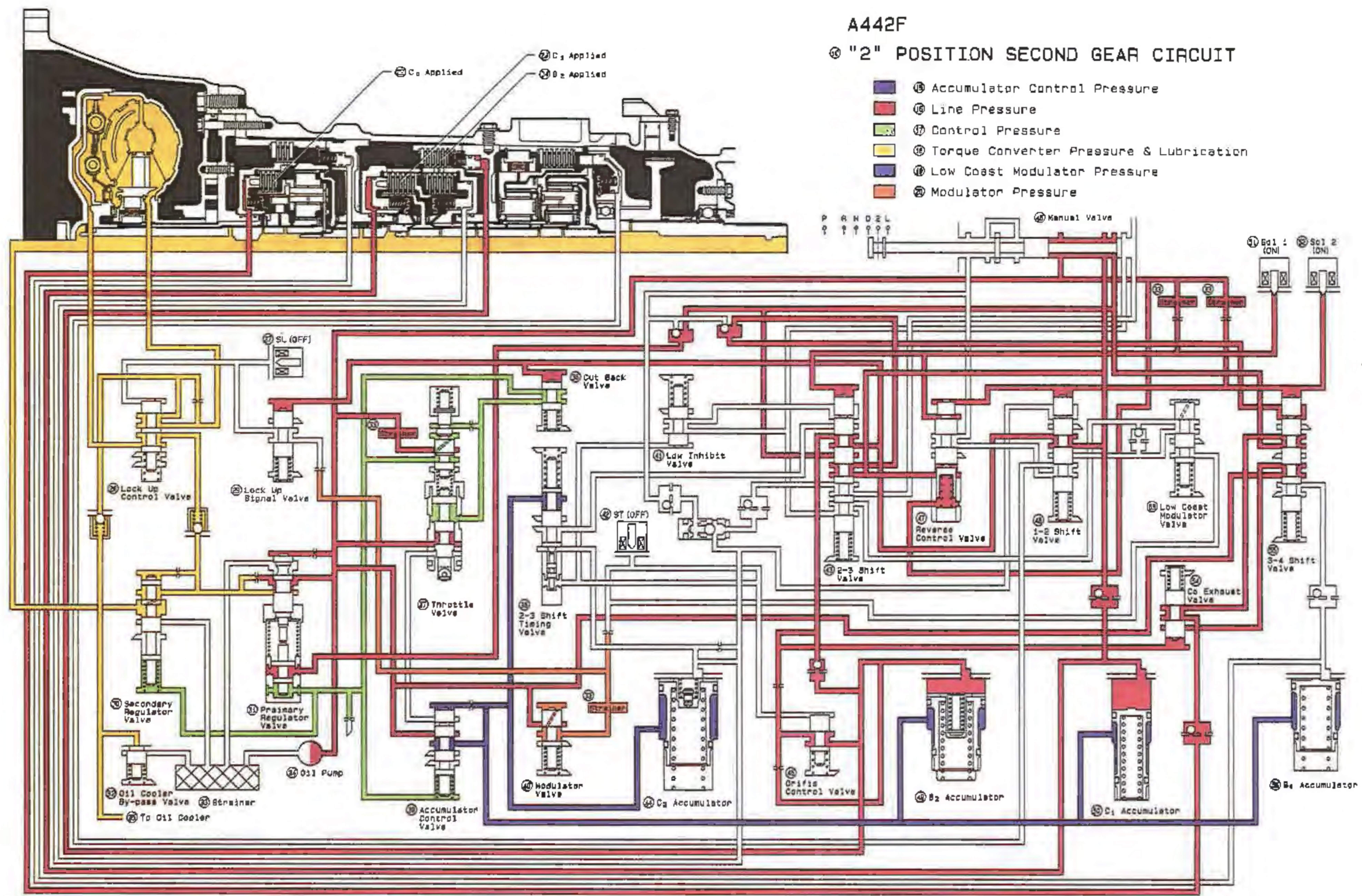


- ⑮ Accumulator Control Pressure
- ⑯ Line Pressure
- ⑰ Control Pressure
- ⑱ Torque Converter Pressure & Lubrication
- ⑲ Low Coast Modulator Pressure
- ⑳ Modulator Pressure



A442F

② "2" POSITION SECOND GEAR CIRCUIT



- ④ Accumulator Control Pressure
- ⑤ Line Pressure
- ⑥ Control Pressure
- ⑦ Torque Converter Pressure & Lubrication
- ⑧ Low Coast Modulator Pressure
- ⑨ Modulator Pressure

P R N D L
 1 2 3 4

⑩ Manual Valve

⑪ Sol 1 (ON)
 ⑫ Sol 2 (ON)

⑬ C₃ Applied

⑭ C₂ Applied

⑮ C₁ Applied

⑯ SL (OFF)

⑰ Cut Back Valve

⑱ Lock Up Control Valve

⑲ Lock Up Signal Valve

⑳ Throttle Valve

㉑ 2-3 Shift Timing Valve

㉒ Modulator Valve

㉓ C₃ Accumulator

㉔ C₂ Accumulator

㉕ C₁ Accumulator

㉖ B₄ Accumulator

㉗ Low Inhibit Valve

㉘ ST (OFF)

㉙ Reverse Control Valve

㉚ 1-2 Shift Valve

㉛ Low Coast Modulator Valve

㉜ 3-4 Shift Valve

㉝ Co. Exhaust Valve

㉞ Oil Pump

㉟ Primary Regulator Valve

㊱ Secondary Regulator Valve

㊲ Oil Cooler By-pass Valve

㊳ Strainer

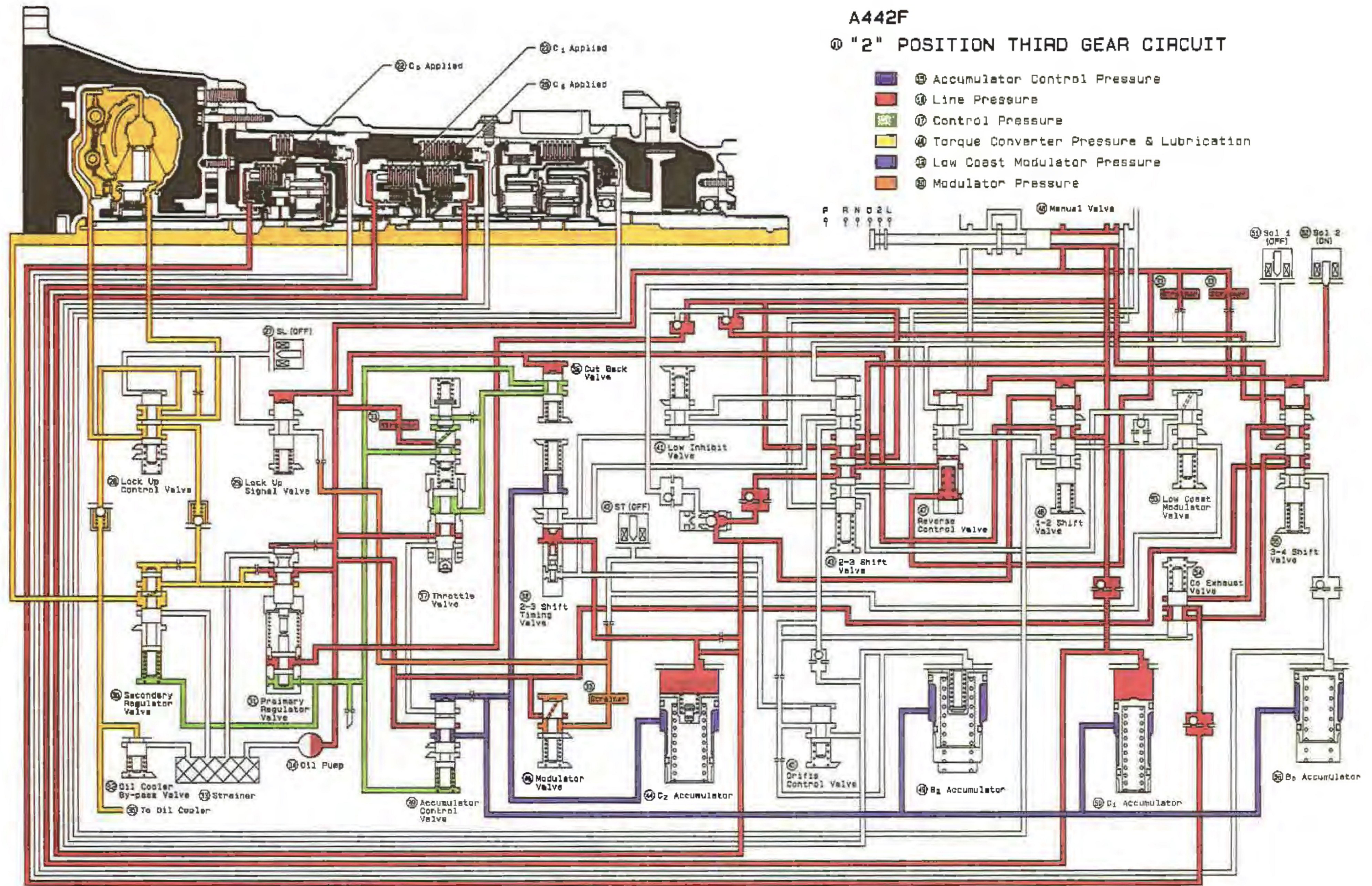
㊴ To Oil Cooler

㊵ Accumulator Control Valve

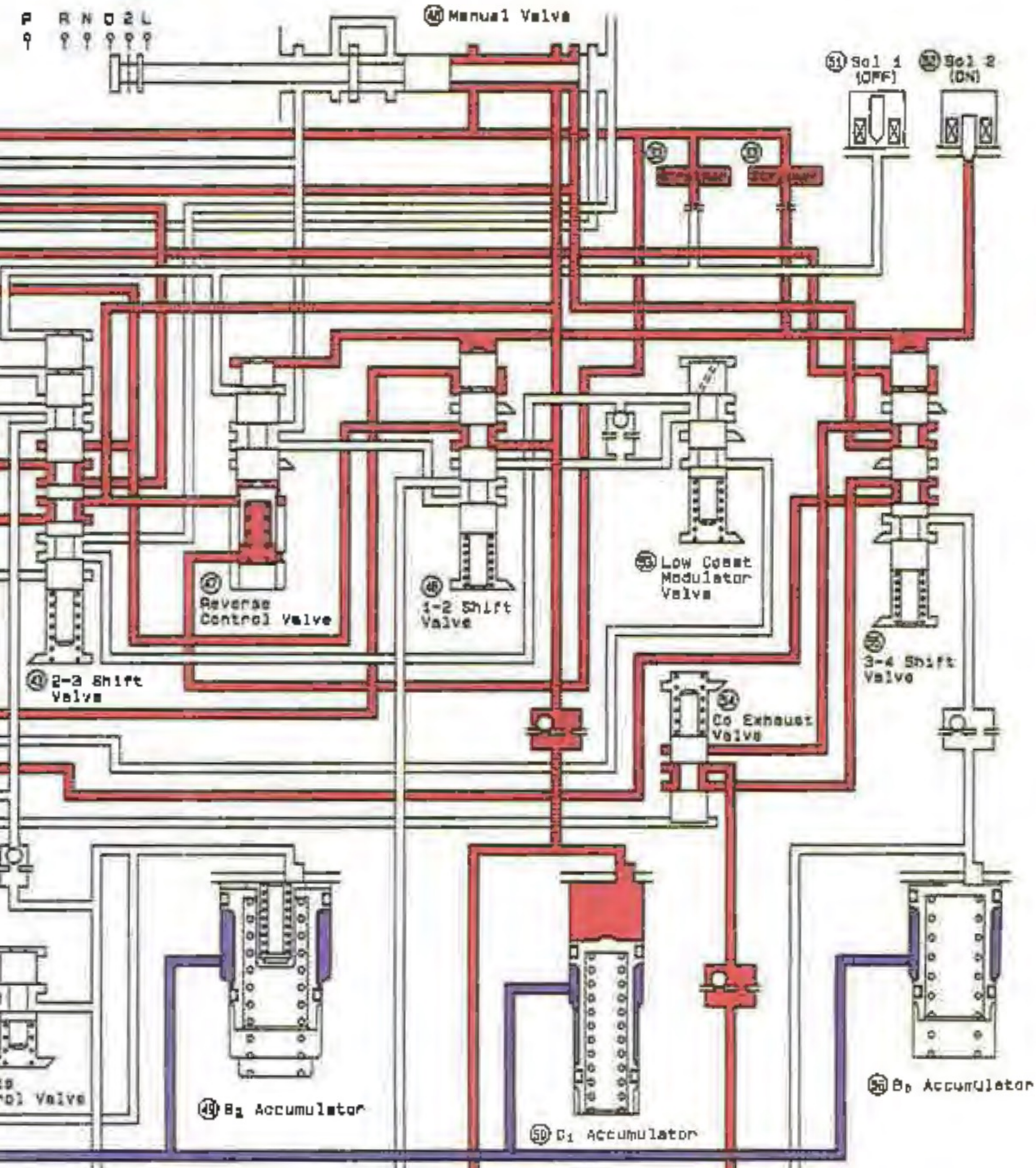
㊶ Orific Control Valve

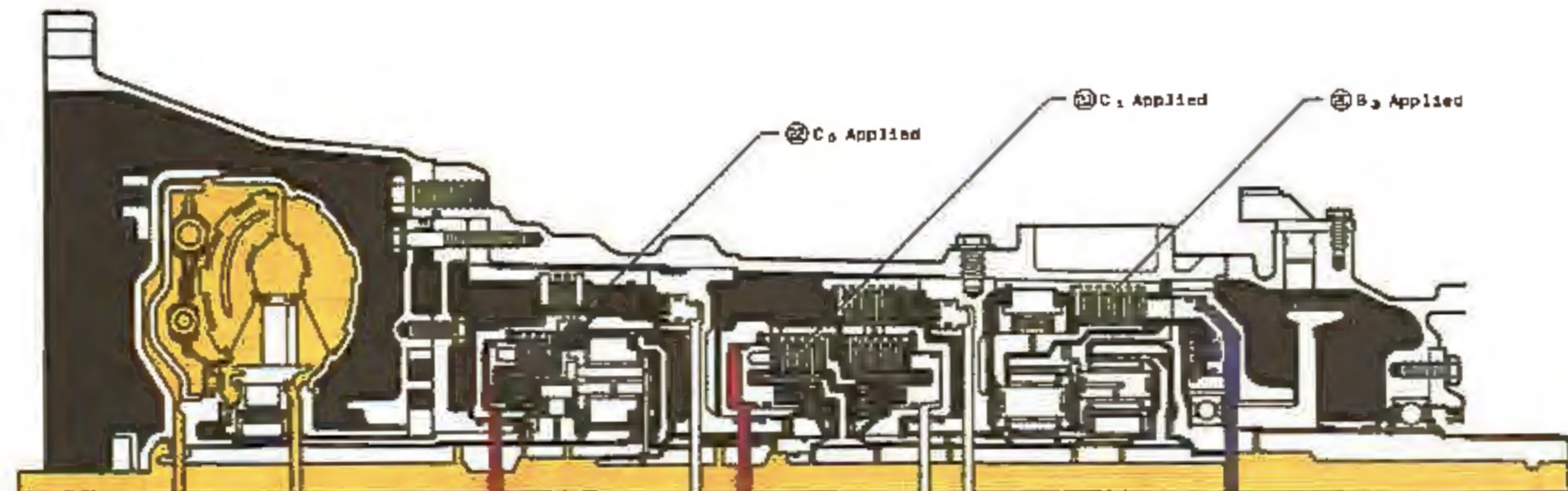
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① "2" POSITION THIRD GEAR CIRCUIT



- ⑬ Accumulator Control Pressure
- ⑭ Line Pressure
- ⑮ Control Pressure
- ⑯ Torque Converter Pressure & Lubrication
- ⑰ Low Coast Modulator Pressure
- ⑱ Modulator Pressure



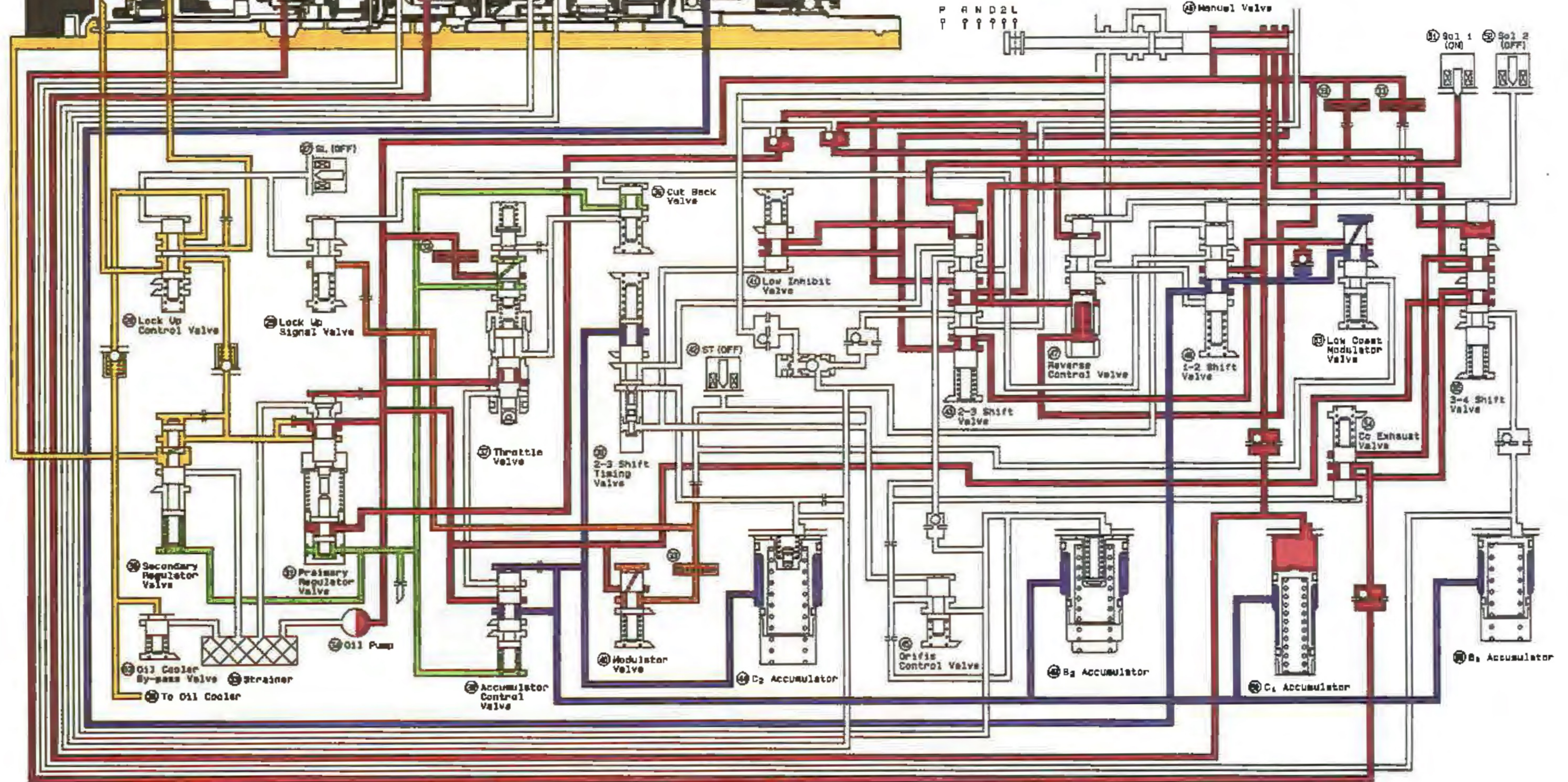


A442F

④ "L" POSITION FIRST GEAR CIRCUIT

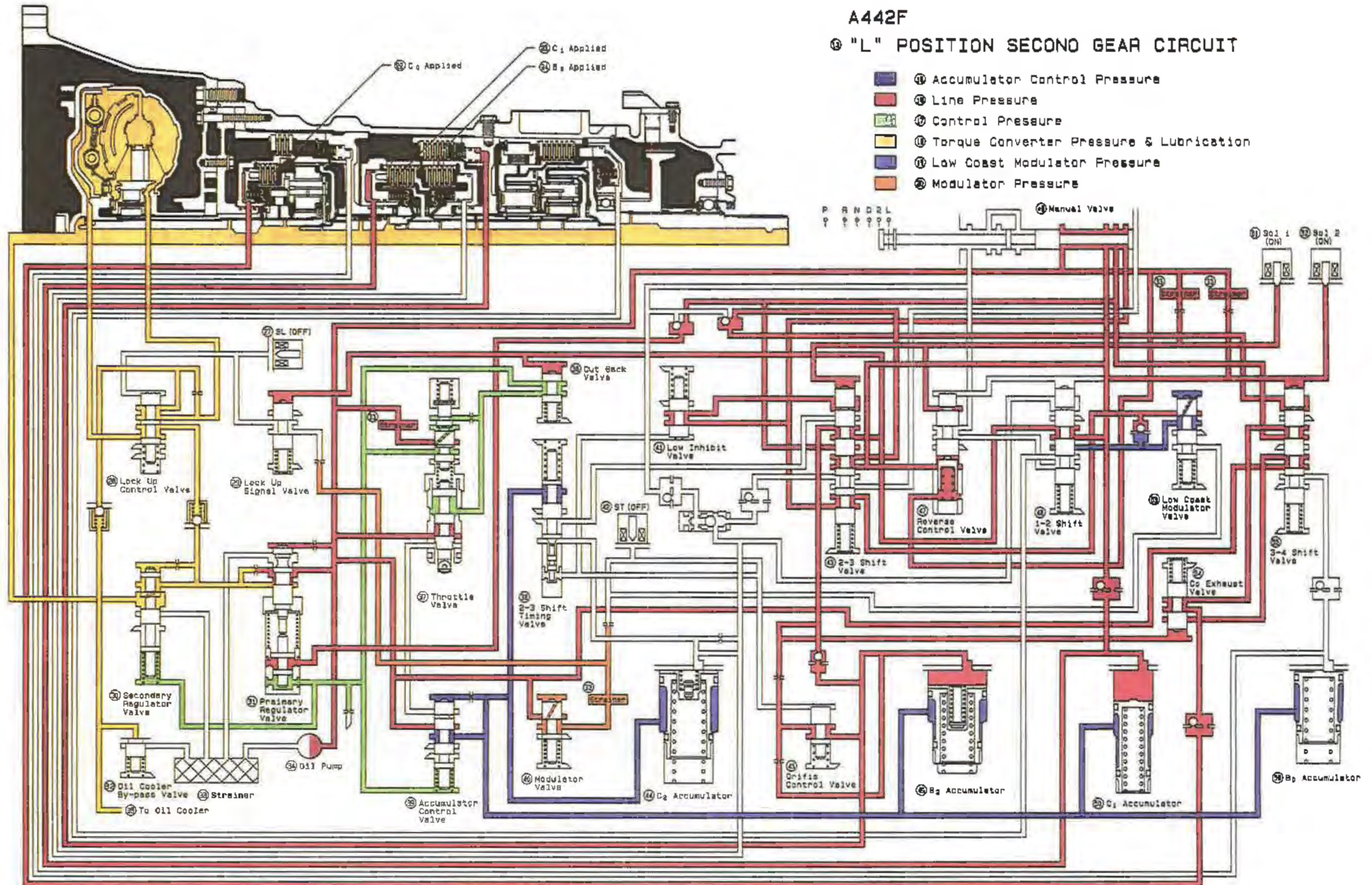
- ⑤ Accumulator Control Pressure
- ⑥ Line Pressure
- ⑦ Control Pressure
- ⑧ Torque Converter Pressure & Lubrication
- ⑨ Low Coast Modulator Pressure
- ⑩ Modulator Pressure

P R N D 2 L
P ↑ ↑ ↑ ↑ ↑

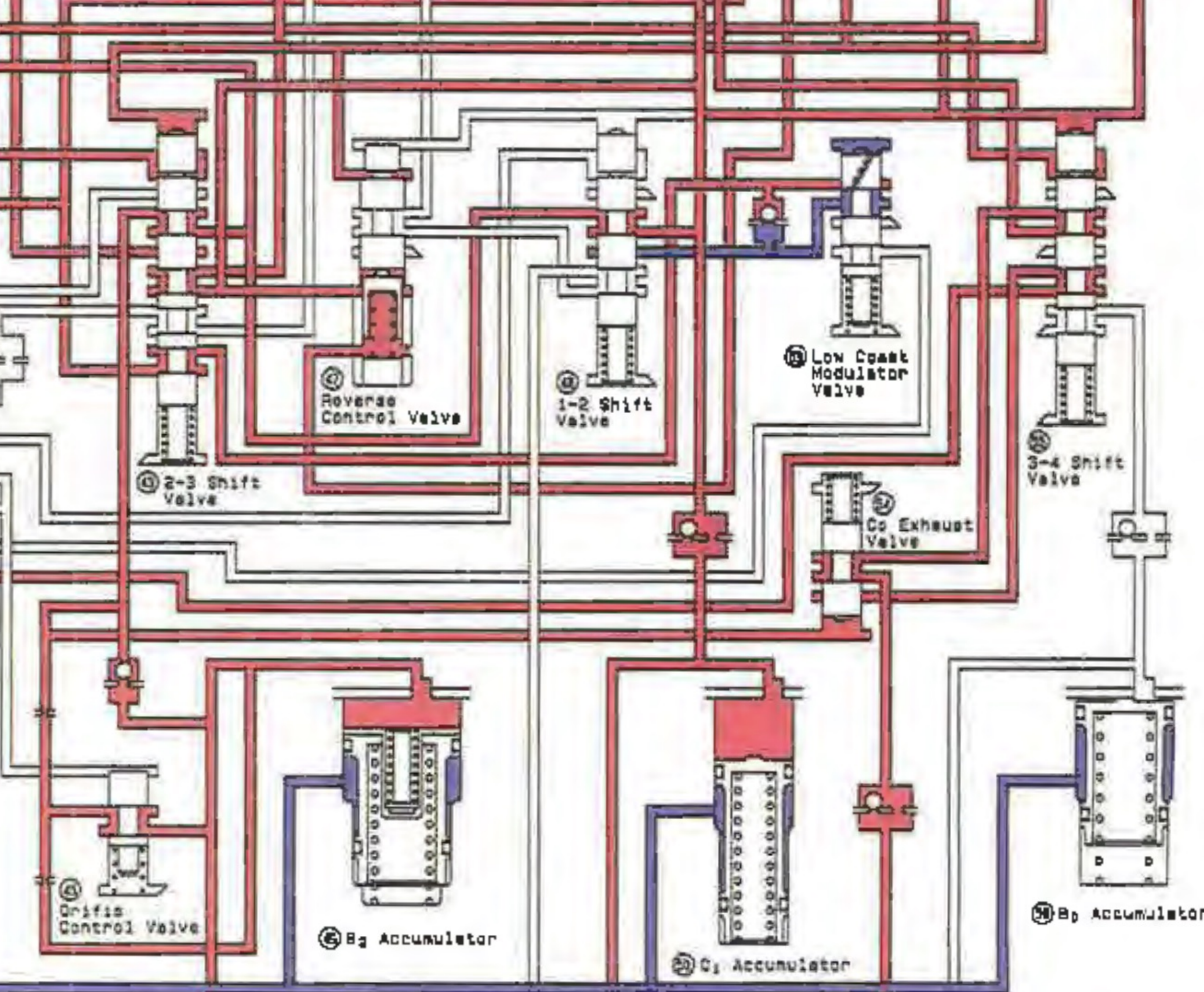
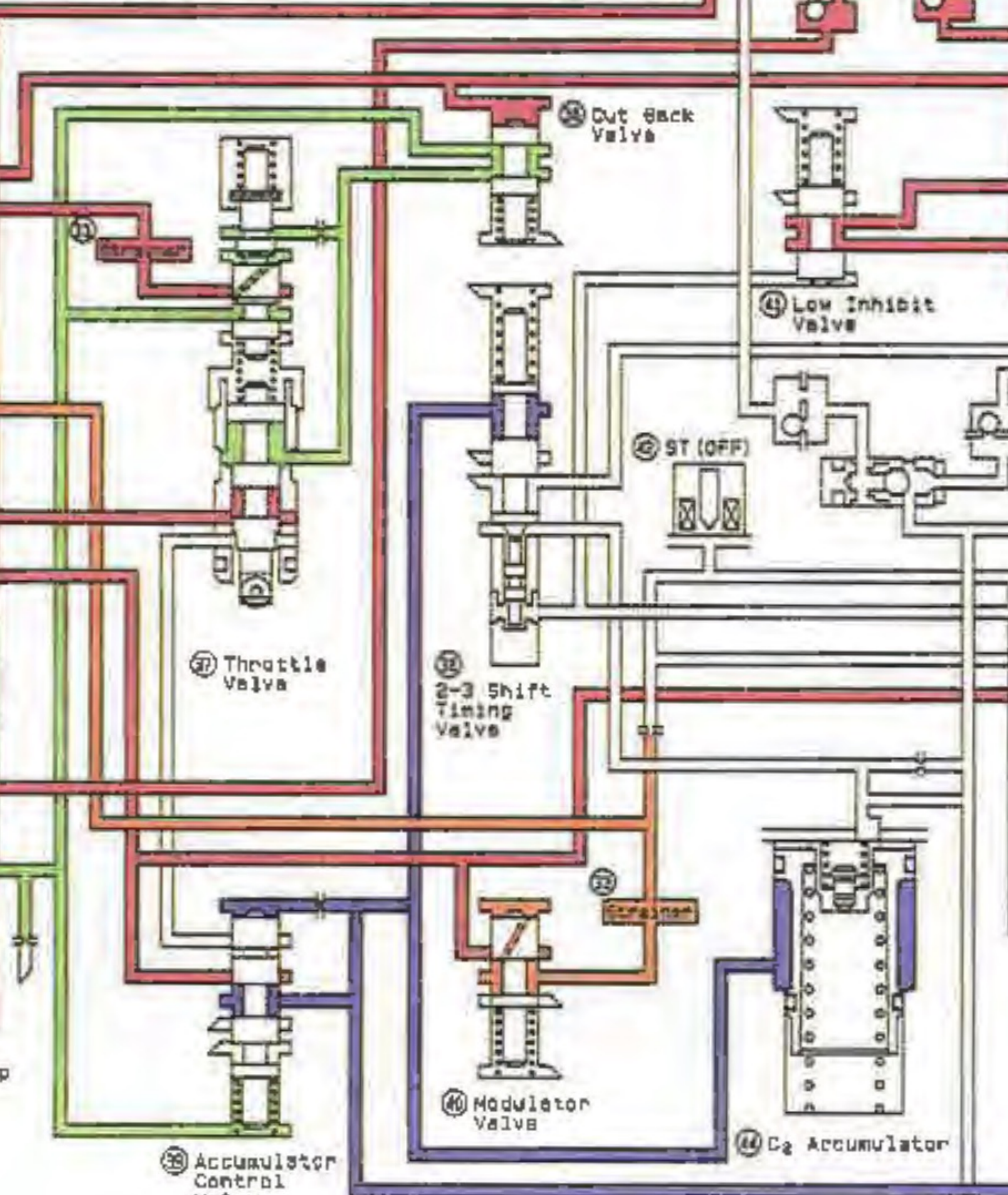
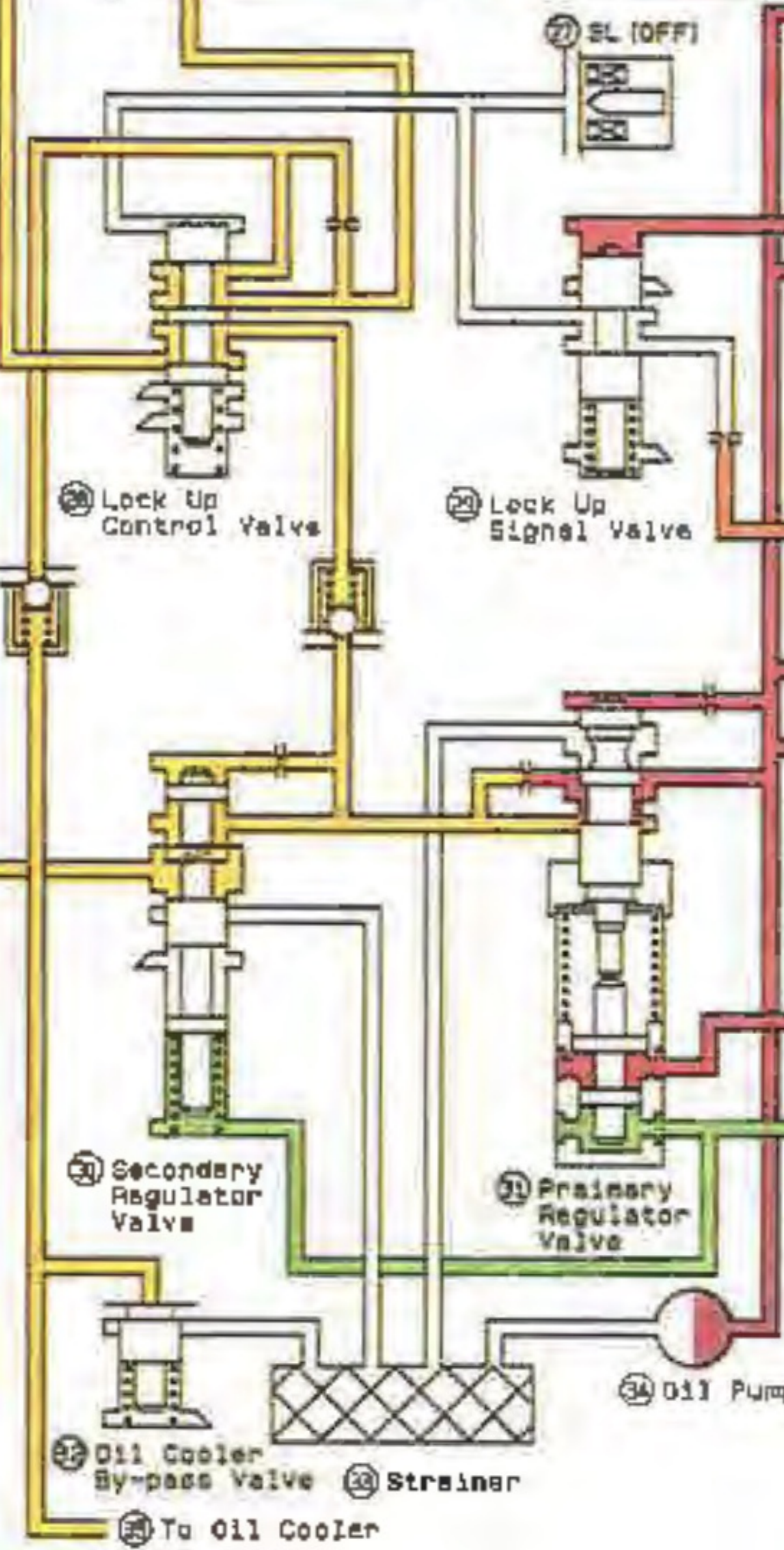
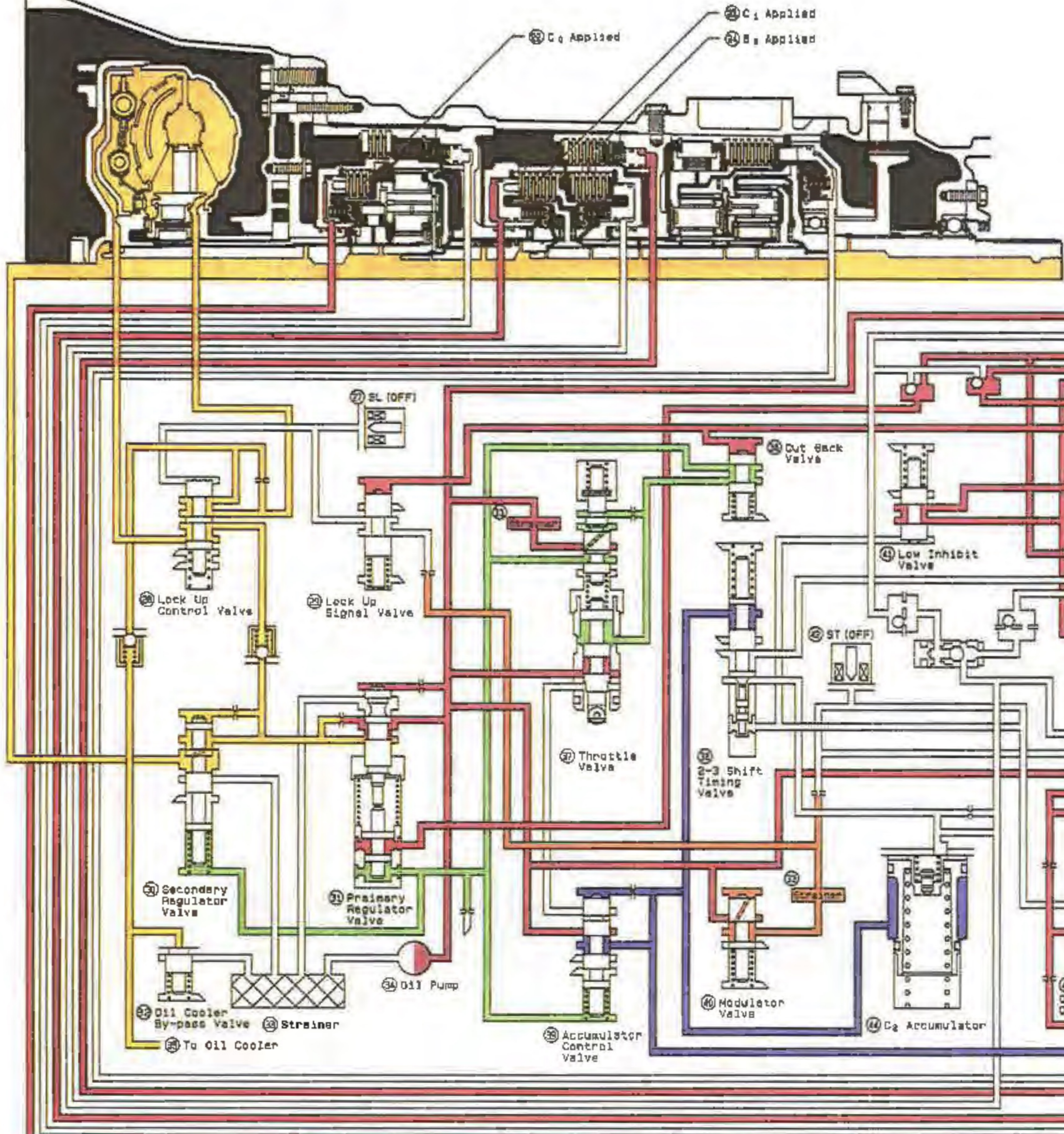
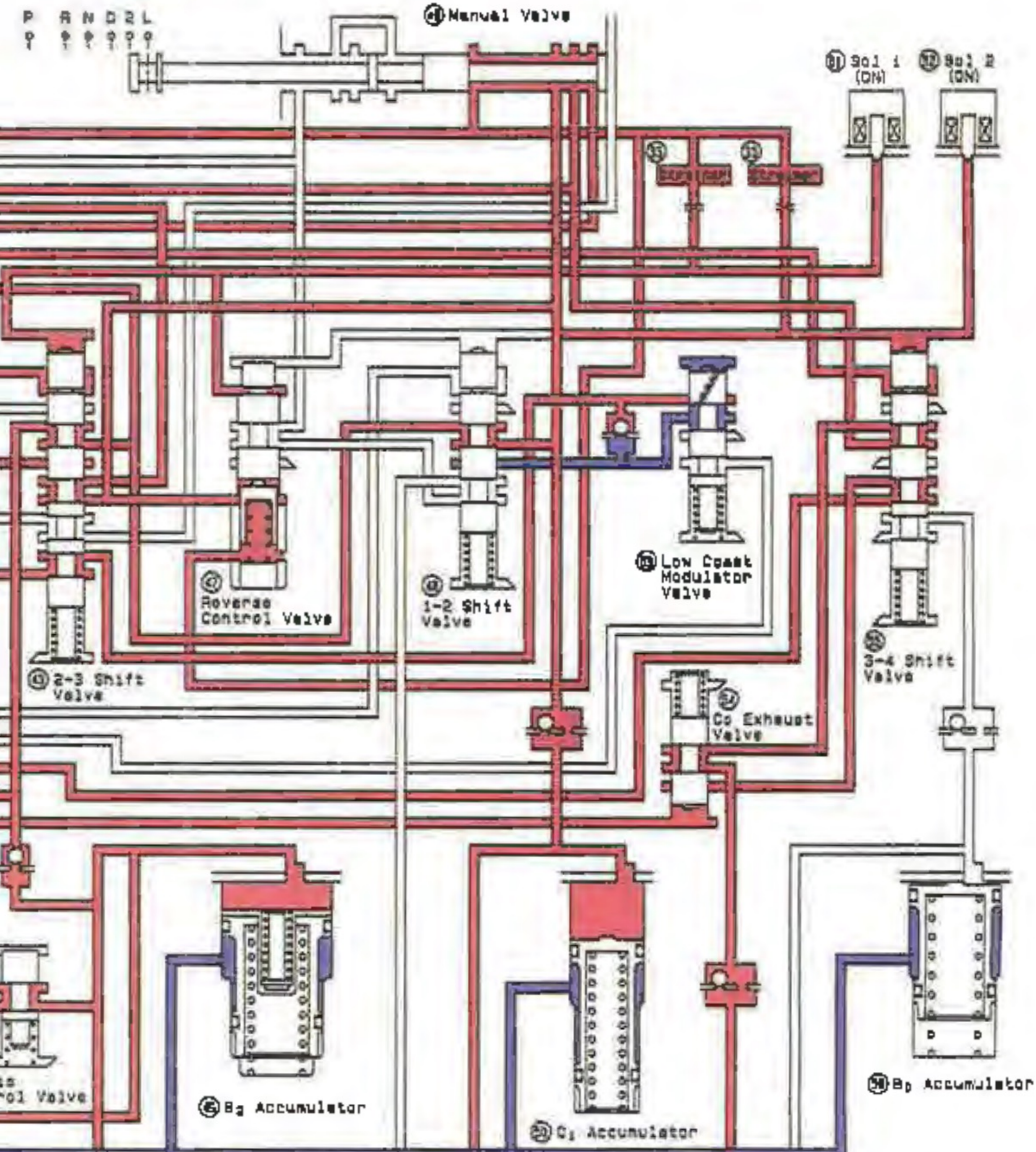


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① "L" POSITION SECOND GEAR CIRCUIT



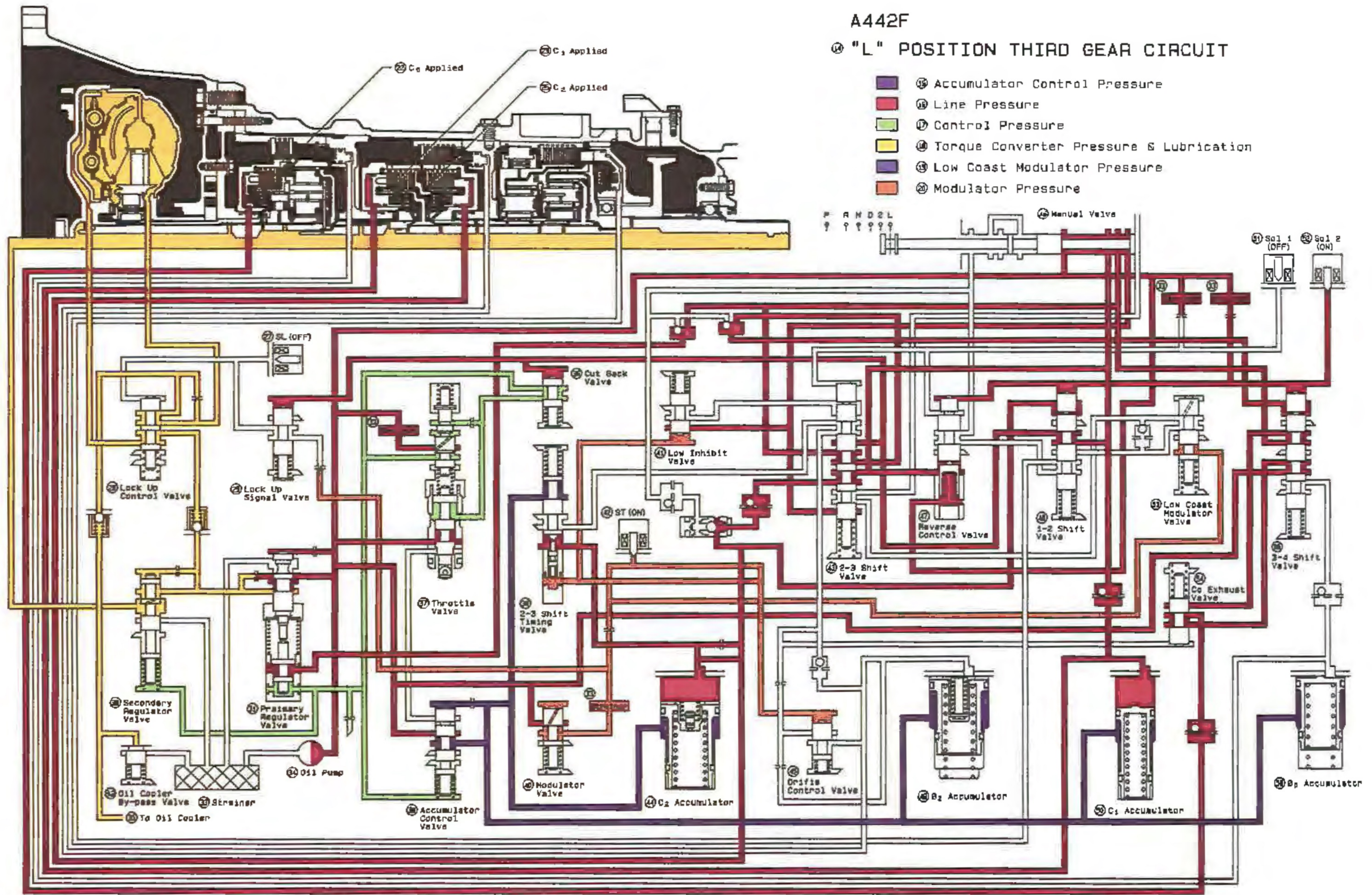
- ① Accumulator Control Pressure
- ② Line Pressure
- ③ Control Pressure
- ④ Torque Converter Pressure & Lubrication
- ⑤ Low Coast Modulator Pressure
- ⑥ Modulator Pressure



A442F

① "L" POSITION THIRD GEAR CIRCUIT

- ⑤ Accumulator Control Pressure
- ⑩ Line Pressure
- ⑦ Control Pressure
- ④ Torque Converter Pressure & Lubrication
- ⑬ Low Coast Modulator Pressure
- ② Modulator Pressure



Multi-lingual List of Components and Technical Terms
Mehrsprachige Bauteil- und Ausdrucksliste
Liste multilingue des pieces constitutives et des termes techniques
Lista multilingüe de componentes y términos técnicos

	Deutsch	Français	Español
	TITEL	DÉSIGNATION	TITULO
①	STROMKREIS FÜR "P"-POSITION	CIRCUIT DE POSITION "P"	CIRCUITO DE POSICION "P"
②	STROMKREIS FÜR "R"-POSITION	CIRCUIT DE POSITION "R"	CIRCUITO DE POSICION "R"
③	STROMKREIS FÜR "N"-POSITION	CIRCUIT DE POSITION "N"	CIRCUITO DE POSICION "N"
④	STROMKREIS FÜR 1. GANG DER "D"-POSITION	CIRCUIT DE POSITION "D" DE PREMIÈRE	CIRCUITO DE PRIMER ENGRANAJE DE POSICION "D"
⑤	STROMKREIS FÜR 2. GANG DER "D"-POSITION	CIRCUIT DE POSITION "D" DE SECONDE	CIRCUITO DE SEGUNDO ENGRANAJE DE POSICION "D"
⑥	STROMKREIS FÜR 3. GANG DER "D"-POSITION	CIRCUIT DE POSITION "D" DE TROISIÈME	CIRCUITO DE TERCER ENGRANAJE DE POSICION "D"
⑦	STROMKREIS FÜR OVERDRIVE DER "D"-POSITION (SPERRE AUS)	CIRCUIT DE POSITION "D" DE VITESSE SURMULTIPLIÉE (ACCOUPLMENT DIRECT DÉBRAYÉ)	CIRCUITO DE ENGRANAJE DE SOBREMARCHA DE POSICION "D" (BLOQUEO DESACTIVADO)
⑧	STROMKREIS FÜR OVERDRIVE DER "D"-POSITION (SPERRE EIN)	CIRCUIT DE POSITION "D" DE VITESSE SURMULTIPLIÉE (ACCOUPLMENT DIRECT APPLIQUÉ)	CIRCUITO DE ENGRANAJE DE SOBREMARCHA DE POSICION "D" (BLOQUEO ACTIVADO)
⑨	STROMKREIS FÜR 1. GANG DER "2"-POSITION	CIRCUIT DE POSITION "2" DE PREMIÈRE	CIRCUITO DE PRIMER ENGRANAJE DE POSICION "2"
⑩	STROMKREIS FÜR 2. GANG DER "2"-POSITION	CIRCUIT DE POSITION "2" DE SECONDE	CIRCUITO DE SEGUNDO ENGRANAJE DE POSICION "2"
⑪	STROMKREIS FÜR 3. GANG DER "2"-POSITION	CIRCUIT DE POSITION "2" DE TROISIÈME	CIRCUITO DE TERCER ENGRANAJE DE POSICION "2"
⑫	STROMKREIS FÜR 1. GANG DER "L"-POSITION	CIRCUIT DE POSITION "L" DE PREMIÈRE	CIRCUITO DE PRIMER ENGRANAJE DE POSICION "L"
⑬	STROMKREIS FÜR 2. GANG DER "L"-POSITION	CIRCUIT DE POSITION "L" DE SECONDE	CIRCUITO DE SEGUNDO ENGRANAJE DE POSICION "L"
⑭	STROMKREIS FÜR 3. GANG DER "L"-POSITION	CIRCUIT DE POSITION "L" DE TROISIÈME	CIRCUITO DE TERCER ENGRANAJE DE POSICION "L"
⑮	Druckspeicher-Steuerdruck	Pression de commande d'accumulateur	Presión de control del acumulador
⑯	Arbeitsdruck	Pression de canalisation	Presión de línea
⑰	Steuerdruck	Pression de commande	Presión de control
⑱	Drehzahlwandlerdruck und Schmierung	Pression et lubrification de convertisseur de couple	Presión y lubricación del convertidor de par
⑲	Modulatordruck für langsamen Schiebetrieb	Pression de modulateur de décélération de première	Presión del modulador de marcha en vacío baja
⑳	Modulatordruck	Pression de modulateur	Presión del modulador
㉑	B0 Angelegt	B0 appliqué	B0 aplicado
㉒	C0 Angelegt	C0 appliqué	C0 aplicado
㉓	C1 Angelegt	C1 appliqué	C1 aplicado
㉔	B2 Angelegt	B2 appliqué	B2 aplicado
㉕	C2 Angelegt	C2 appliqué	C2 aplicado
㉖	B3 Angelegt	B3 appliqué	B3 aplicado
	MAGNETVENTILE	SOLÉNOÏDES DE COMMANDE	VALVULAS DE SOLENOIDE
㉗	Magnetventil Nr. 1	Solénoïde de commande no.1	Válvula de solenoide N.º 1
㉘	Magnetventil Nr. 2	Solénoïde de commande no.2	Válvula de solenoide N.º 2
㉙	Überbrückungs-Magnetventil	Solénoïde de commande d'accouplement direct	Válvula de solenoide de bloqueo
㉚	Zeitschaltungs-Magnetventil	Solénoïde de commande de synchronisation	Válvula de solenoide de distribución
	SCHALTVENTILE	TIROIRS DE PASSAGE	VALVULAS DE CAMBIOS
㉛	Schaltventil 1 -2 Gang	Tiroir de passage 1-2	Válvula de cambios 1-2
㉜	Schaltventil 2. -3. Gang	Tiroir de passage 2-3	Válvula de cambios 2-3
㉝	Schaltventil 3. -4. Gang	Tiroir de passage 3-4	Válvula de cambios 3-4
㉞	Überbrückungs-Steuerventil	Tiroir de commande d'accouplement direct	Válvula de control de bloqueo
㉟	Überbrückungs-Signalventil	Tiroir de signal d'accouplement direct	Válvula de señal de bloqueo
㊱	Rückwärtsgang-Steuerventil	Tiroir de commande de marche arrière	Válvula de control de march atrás
	REGELVENTILE	SOUPAPES RÉGULATRICES	VALVULAS DEL REGULADOR
㊲	Primär-Regelventil	Soupape régulatrice primaire	Válvula del regulador primaria
㊳	Sekundär-Regelventil	Soupape régulatrice secondaire	Válvula del regulador secundaria
	MOOULATORVENTILE	TIROIRS MODULETEURS	VALVULAS DEL MODULADOR
㊴	Modulatorventil	Tiroir modulateur	Válvula del modulador
㊵	Modulatorventil für langsamen Schiebetrieb	Tiroir modulateur de décélération de première	Válvula del modulador de marcha en vacío baja
	ANDERE VENTILE	AUTRES SOUPAPES	OTRAS VALVULAS
㊶	Drosselventil	Papillon d'accélération	Válvula del acelerador
㊷	Rückschaltventil	Soupape de coupure et de retour	Válvula del corte
㊸	Sperrventil für 1. Gang	Soupape inhibitrice de première	Válvula de inhibición baja
㊹	C0-Auslassventil	Soupape sur échappement C0	Válvula de escape C0
㊺	Druckspeicher-Steuerventil	Soupape de commande d'accumulateur	Válvulas de control del acumulador
㊻	Ölkühler-Bypassventil	Soupape de dérivation de radiateur d'huile	Válvula de derivación del enfriador de aceite
㊼	Regelblenden-Steuerventil	Soupape de contrôle d'orifice	Válvula de control de orificio
	DRUCKSPEICHER	ACCUMULATEURS	ACUMULADORES
㊽	B0-Druckspeicher	Accumulateur B0	Acumulador B0
㊾	B2-Druckspeicher	Accumulateur B2	Acumulador B2
㊿	C1-Druckspeicher	Accumulateur C1	Acumulador C1
㋀	C2-Druckspeicher	Accumulateur C2	Acumulador C2
	SONSTIGE	AUTRES	OTROS
㋁	Ölpumpe	Pompe à huile	Bomba de aceite
㋂	Filtersieb	Crépine	Colador
㋃	Ölkühler	Radiateur d'huile	Enfriador de aceite