

# Schematic

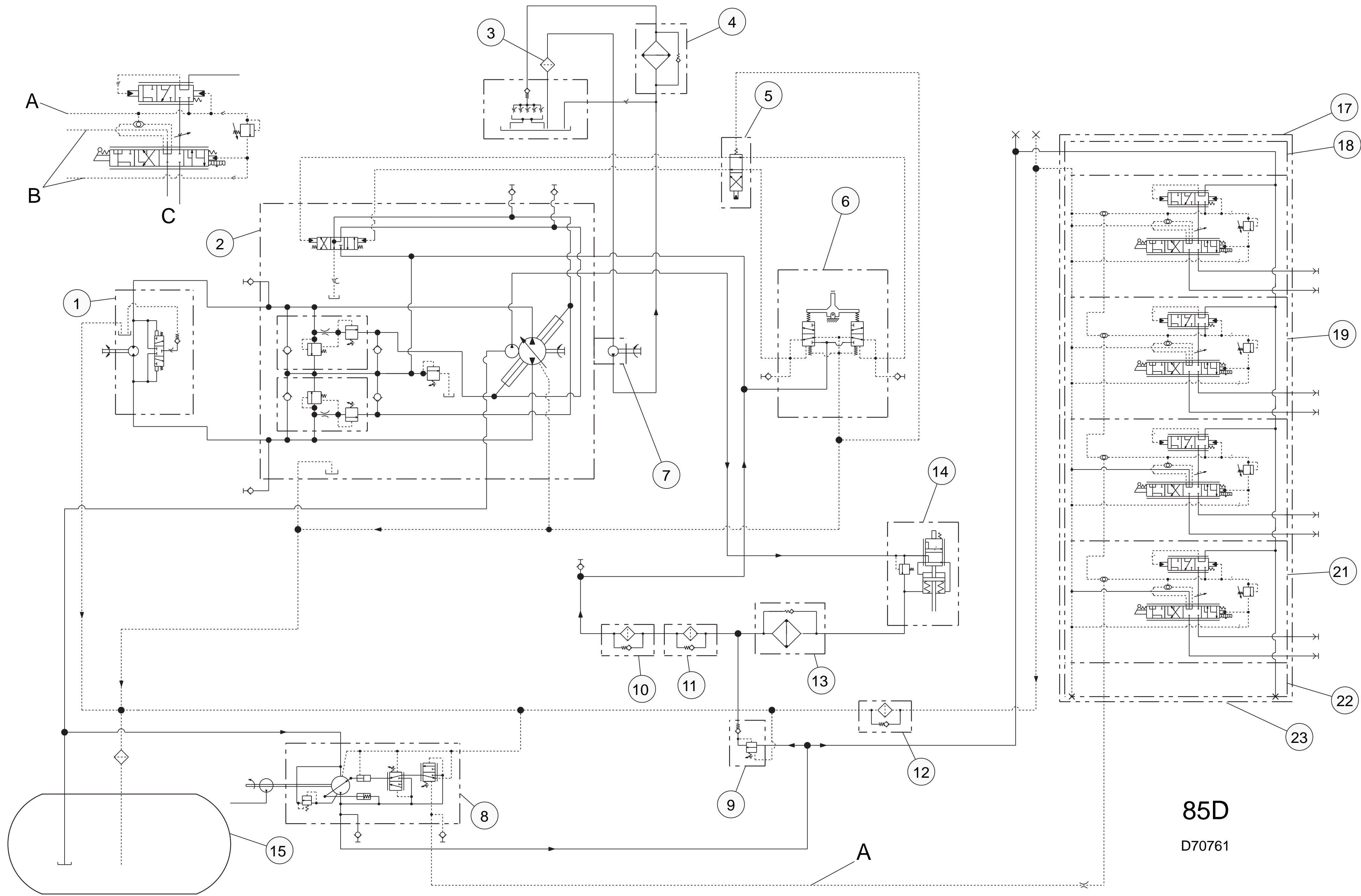
65D, 75D and 85D Challenger  
Agricultural Tractors  
Hydraulic System

2ZJ2300-UP  
4GR1-UP  
5AR1-UP

| FLUID POWER SYMBOLS      |  |                            |  |                                   |  |
|--------------------------|--|----------------------------|--|-----------------------------------|--|
| BASIC COMPONENT SYMBOLS  |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
| VALVE ENVELOPES          |  | VALVES                     |  | VALVE PORTS                       |  |
|                          |  |                            |  |                                   |  |
| CONTROL VALVES           |  | CHECK VALVES               |  | ROTATING SHAFTS                   |  |
|                          |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
| FLUID STORAGE RESERVOIRS |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
| COMBINATION CONTROLS     |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
| MANUAL CONTROL SYMBOLS   |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
| PILOT CONTROL SYMBOLS    |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
| ACCUMULATORS             |  | CROSSING AND JOINING LINES |  | HYDRAULIC AND PNEUMATIC CYLINDERS |  |
|                          |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
| HYDRAULIC PUMPS          |  | HYDRAULIC MOTORS           |  | INTERNAL PASSAGeways              |  |
|                          |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |
|                          |  |                            |  |                                   |  |

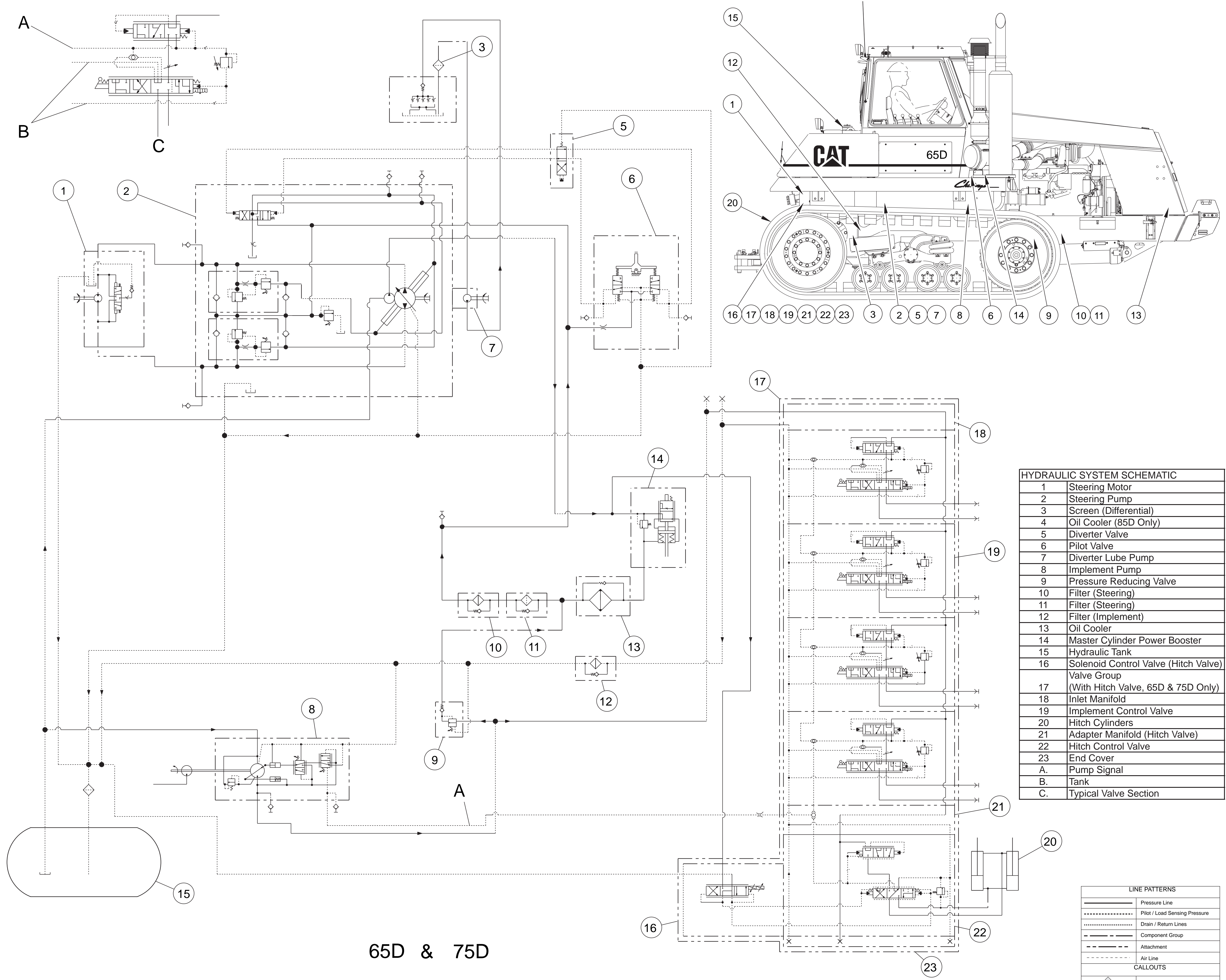
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85D  
D70761

| HYDRAULIC SYSTEM SCHEMATIC |  |
|----------------------------|--|
| 1                          | Steering Motor                                 |
| 2                          | Steering Pump                                  |
| 3                          | Screen (Differential)                          |
| 4                          | Oil Cooler (85D Only)                          |
| 5                          | Diverter Valve                                 |
| 6                          | Pilot Valve                                    |
| 7                          | Diverter Lube Pump                             |
| 8                          | Implement Pump                                 |
| 9                          | Pressure Reducing Valve                        |
| 10                         | Filter (Steering)                              |
| 11                         | Filter (Steering)                              |
| 12                         | Filter (Implement)                             |
| 13                         | Oil Cooler                                     |
| 14                         | Master Cylinder Power Booster                  |
| 15                         | Hydraulic Tank                                 |
| 16                         | Solenoid Control Valve (Hitch Valve)           |
| 17                         | Valve Group (With Hitch Valve, 65D & 75D Only) |
| 18                         | Inlet Manifold                                 |
| 19                         | Implement Control Valve                        |
| 20                         | Hitch Cylinders                                |
| 21                         | Adapter Manifold (Hitch Valve)                 |
| 22                         | Hitch Control Valve                            |
| 23                         | End Cover                                      |
| A.                         | Pump Signal                                    |
| B.                         | Tank   |
| C.                         | Typical Valve Section                          |



**65D & 75D**

| HYDRAULIC SYSTEM SCHEMATIC |  |
|----------------------------|--|
| 1                          | Steering Motor                                   |
| 2                          | Steering Pump                                    |
| 3                          | Screen (Differential)                            |
| 4                          | Oil Cooler (85D Only)                            |
| 5                          | Diverter Valve                                   |
| 6                          | Pilot Valve                                      |
| 7                          | Diverter Lube Pump                               |
| 8                          | Implement Pump                                   |
| 9                          | Pressure Reducing Valve                          |
| 10                         | Filter (Steering)                                |
| 11                         | Filter (Steering)                                |
| 12                         | Filter (Implement)                               |
| 13                         | Oil Cooler                                       |
| 14                         | Master Cylinder Power Booster                    |
| 15                         | Hydraulic Tank                                   |
| 16                         | Solenoid Control Valve (Hitch Valve) Valve Group |
| 17                         | (With Hitch Valve, 65D & 75D Only)               |
| 18                         | Inlet Manifold                                   |
| 19                         | Implement Control Valve                          |
| 20                         | Hitch Cylinders                                  |
| 21                         | Adapter Manifold (Hitch Valve)                   |
| 22                         | Hitch Control Valve                              |
| 23                         | End Cover  |
| A.                         | Pump Signal                                      |
| B.                         | Tank   |
| C.                         | Typical Valve Section                            |

| LINE PATTERNS |                               |
|---------------|-------------------------------|
|               | Pressure Line                 |
|               | Pilot / Load Sensing Pressure |
|               | Drain / Return Lines          |
|               | Component Group               |
|               | Attachment                    |
|               | Air Line                      |

| CALLOUTS |  |
|----------|--|
|          | Taps (Pressure, Sampling, Control) by letter |
|          | Components by number                         |

**THIS SCHEMATIC IS FOR THE 65D, 75D and 85D CHALLENGER TRACTORS**  
Components are shown installed on a fully operable machine with the key and engine off and transmission shifter in neutral.  
Refer to the appropriate Service Manual for Troubleshooting, Specifications and Systems Operations