



Technical Service Information

FORD AF21/TF-81SC VALVE BODY IDENTIFICATION

The TF81SC or AF21 six speed transmission is used by Ford and Mazda in the United States. This bulletin has been created to provide the rebuild technician with valve body identification, solenoid identification and small parts locations and identification.

We recommend that you disregard any previous information pertaining to the TF81SC/AF21 valve body that ATSG has done in the past and reference this information to insure accuracy and correctness.

Refer to Figure 1 Valve Body Casting Number T1-9172 for Solenoid ID.

Refer to Figure 2 Valve Body Casting Number T2-9174 for Solenoid ID.

Refer to Figure 3 for Front Casting - Upper Side Valve ID & Spring Dimensions.

Refer to Figure 4 for Front Casting - Lower Side Valve ID, Spring Dimensions, Small Parts ID & Location.

Refer to Figure 5 for Front Casting - Lower Side Valve Body Casting, Spacer Plate & Gasket Differences.

Refer to Figure 6 for Middle Casting - Upper Side Valve ID, Spring Dimensions, Small Parts ID & Location.

Refer to Figure 7 for Middle Casting - Lower Side Valve ID, Spring Dimensions, Small Parts ID & Location.

Refer to Figure 8 for Rear Casting - Upper Side Valve ID, Spring Dimensions, Small Parts ID & Location.

Refer to Figure 9 for Rear Casting - Lower Side Accumulator ID & Spring Dimensions.

Many thanks to Gerald of Worldwide Transmission Parts for the loan of a Valve Body.

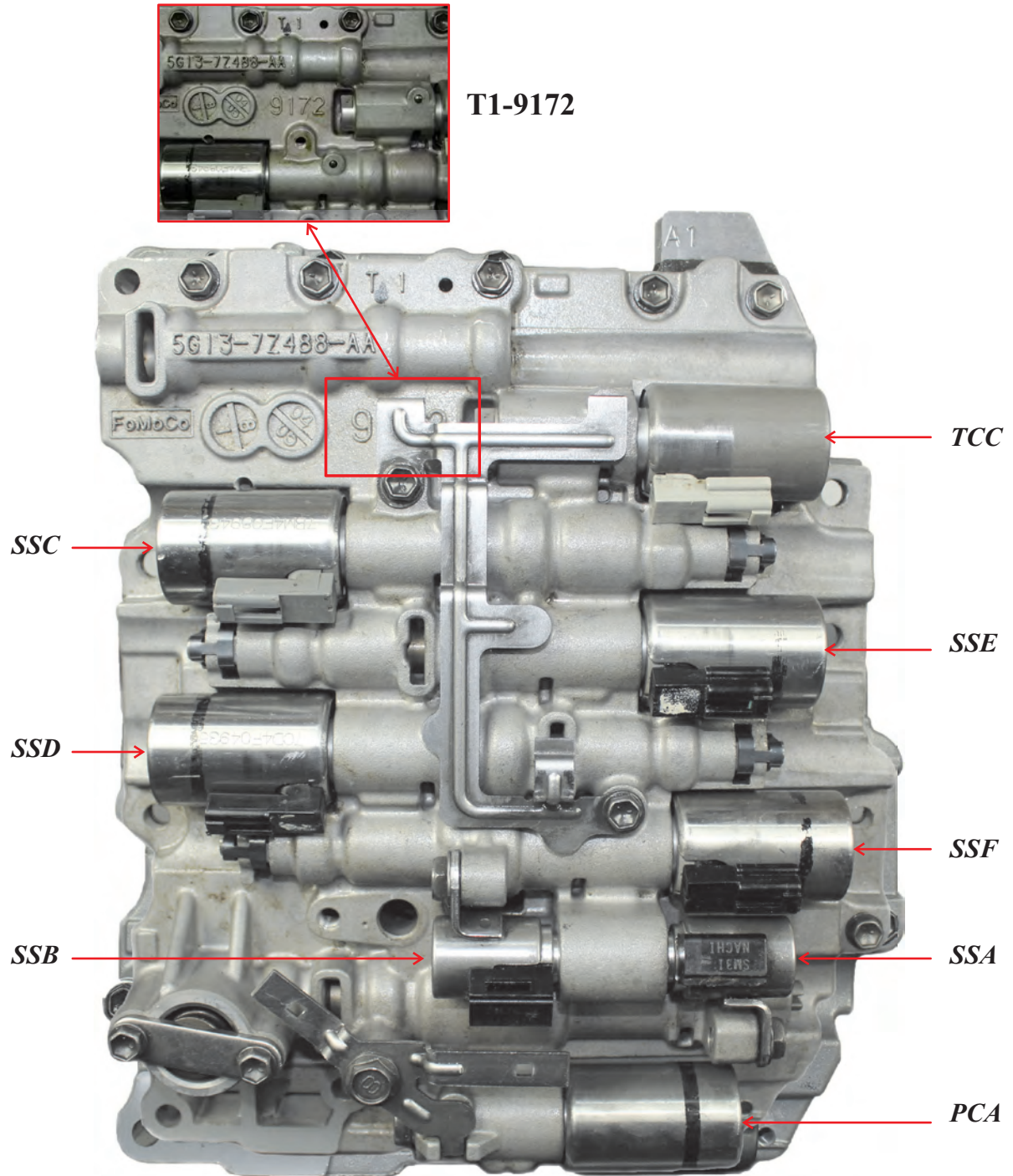


Figure 1

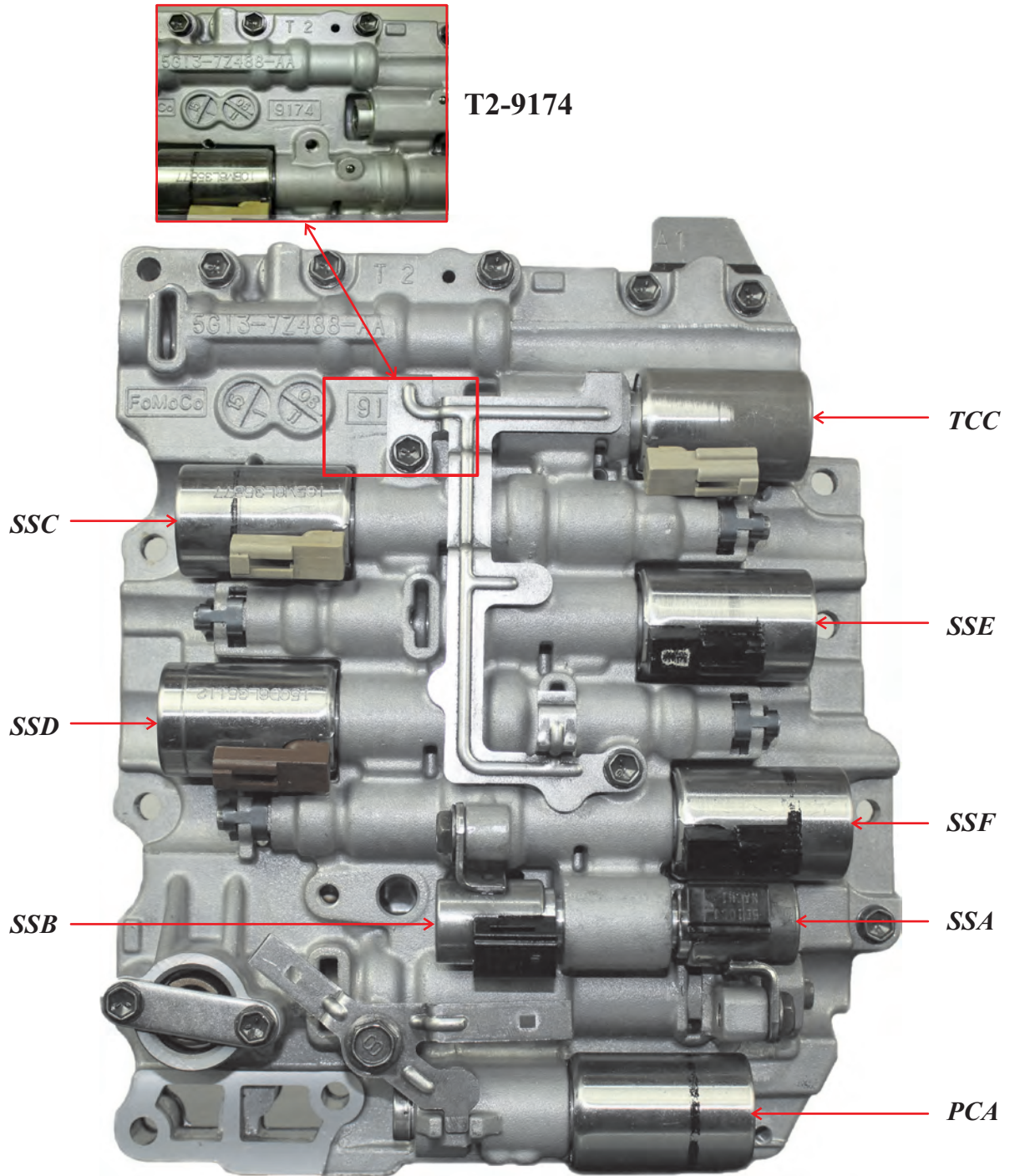
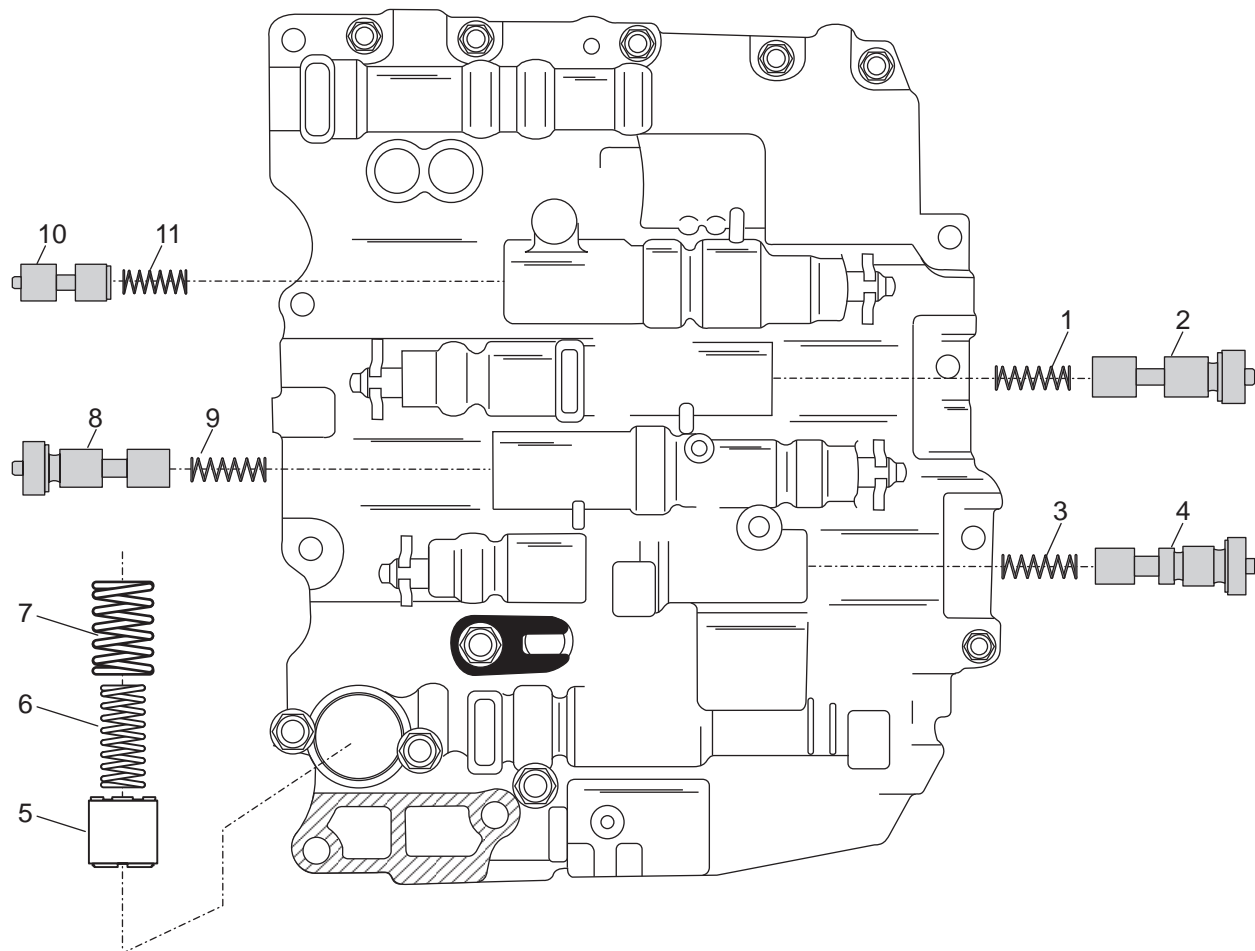


Figure 2

AF21/TF-81SC

FRONT CASTING UPPER SIDE



1. C3 Clutch Control Valve Spring (.746" x .254" x .033" x 10 Plain)
2. C3 Clutch Control Valve
3. B1 Band Control Valve Spring (.679" x .256" x .031" x 10 Blue)
4. B1 Band Control Valve
5. B1 Band Accumulator Piston
6. B1 Accumulator Outer Spring (1.082" x .631" x .081" x 6 Plain)
7. B1 Accumulator Inner Spring (1.082" x .426" x .064" x 9 Battleship Grey)
8. C2 Clutch Control Valve
9. C2 Clutch Control Valve Spring (.746" x .254" x .033" x 10 Plain)
10. C1 Clutch Control Valve
11. C1 Clutch Control Valve Spring (.770" x .324" x .035" x 8 Salmon)

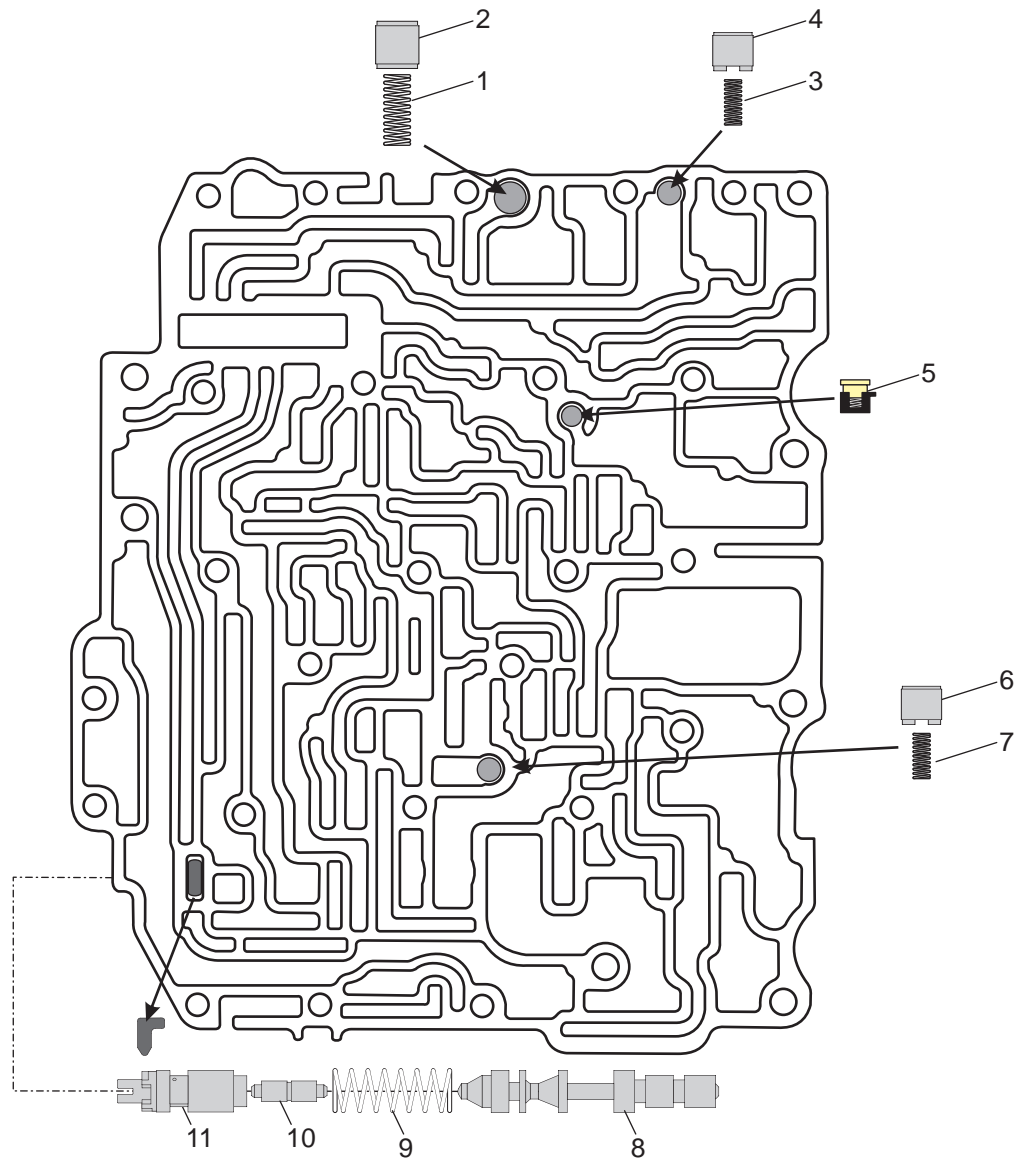
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Figure 3

Technical Service Information

AF21/TF-81SC

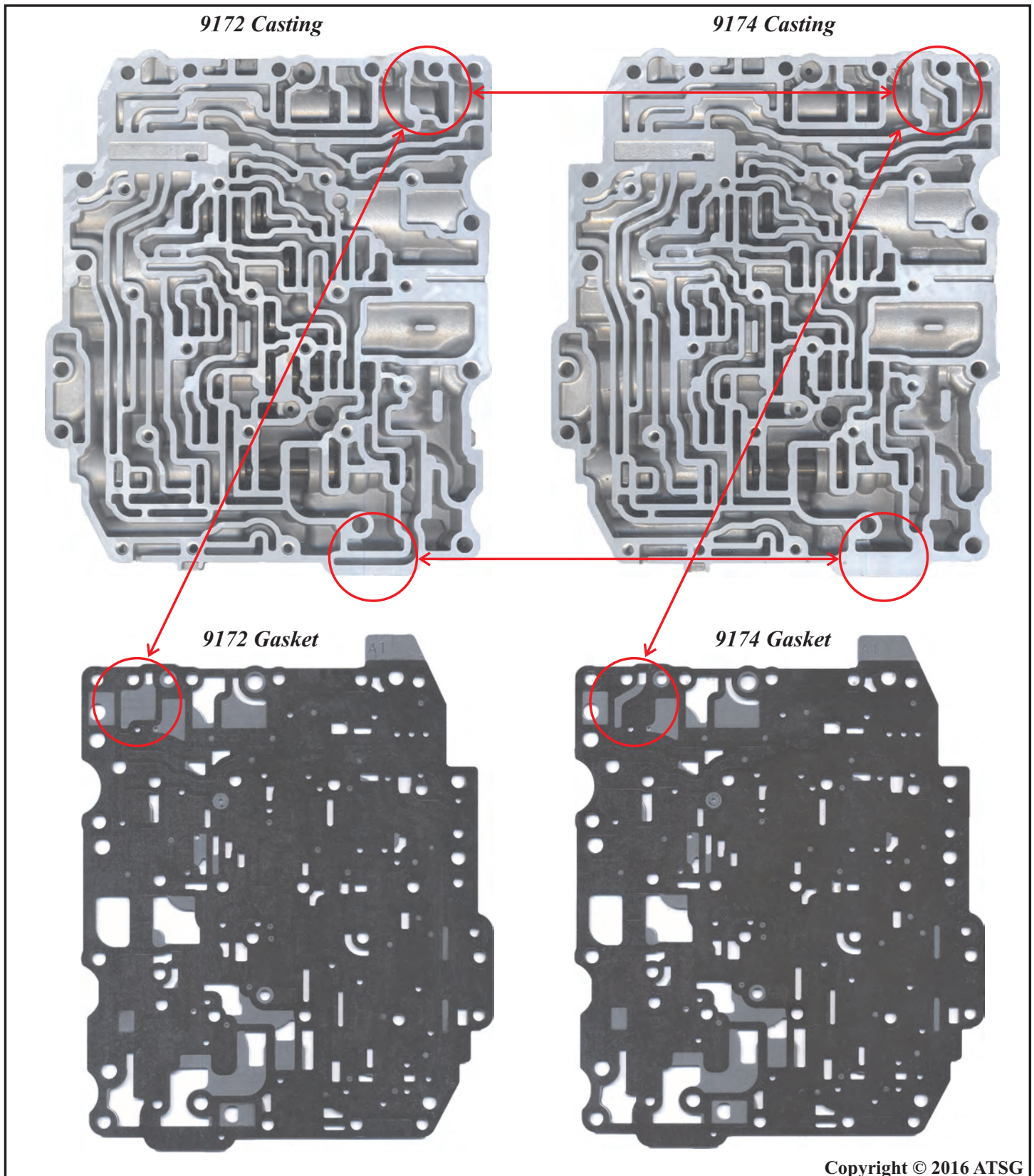
FRONT CASTING LOWER SIDE



1. Manual Valve Reverse Boost Check Valve 1 Spring (.600" x .247" x .023" x 12 White)
2. Manual Valve Reverse Boost Check Valve 1
3. Forward Check Valve 1 Spring (.378" x .163" x .016" x 9.5 Red)
4. Forward Check Valve 1
5. C3 Clutch Check Valve
6. B1 Band Check Valve Spring (.378" x .163" x .016" x 9.5 Red)
7. B1 Band Check Valve
8. Primary Pressure Regulator Valve
9. Primary Pressure Regulator Valve Spring (1.562" x .548" x .047" x 8 Plain)
10. Reverse Boost Valve
11. Reverse Boost Valve and Pressure Adjusting Sleeve

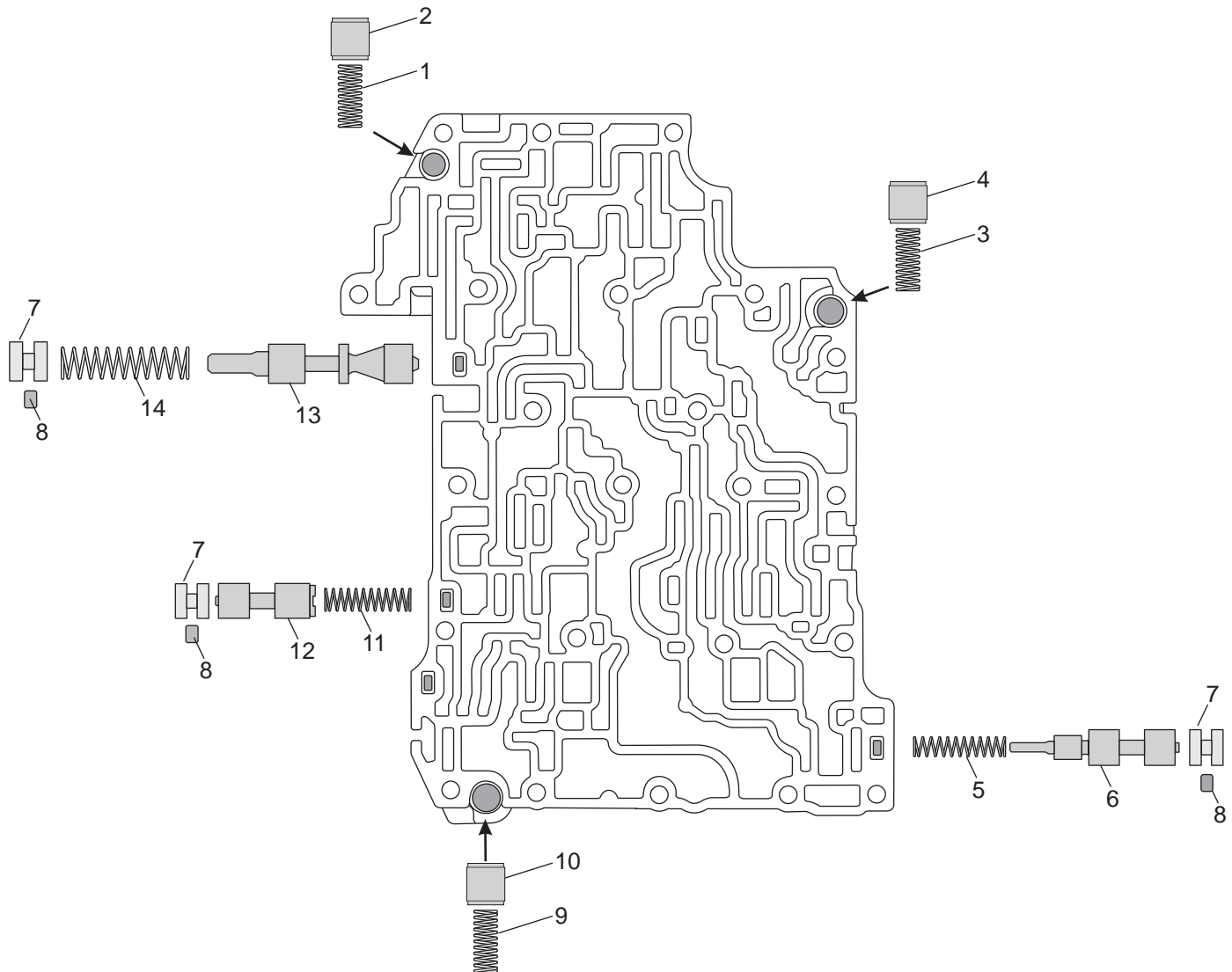
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Figure 4



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Figure 5



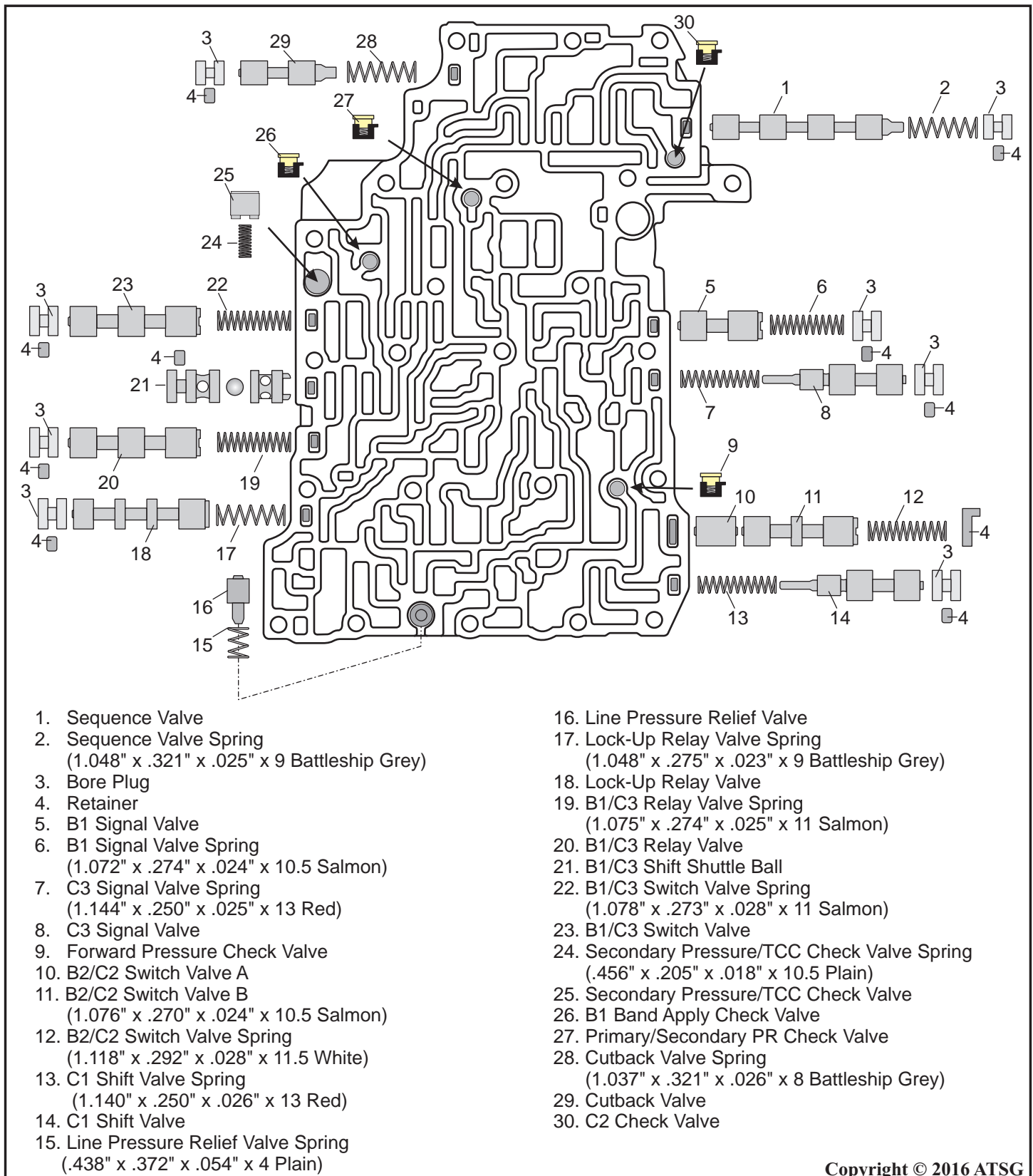
1. Cooler By-Pass Check Valve Spring (.629" x .249" x .035" x 8.5 Red)
2. Cooler By-Pass Check Valve
3. TCC Check Valve Spring (.559" x .249" x .041" x 7.5 Battleship Grey)
4. TCC Check Valve
5. C3 Signal Valve Spring (1.122" x .249" x .026" x 13.5 Red or Plain)
6. C3 Signal Valve
7. Bore Plug
8. Retainer
9. C2 Clutch Check Valve Spring (.596" x .249" x .024" x 12 White)
10. C2 Clutch Check Valve
11. B1 Signal Valve Spring (1.076" x .270" x .024" x 10.5 Salmon)
12. B1 Signal Valve
13. Secondary Pressure Regulator Valve
14. Secondary Pressure Regulator Valve Spring (1.617" x .418" x .051" x 9.5 Plain)

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Figure 6

AF21/TF-81SC

MIDDLE CASTING LOWER SIDE



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Figure 7

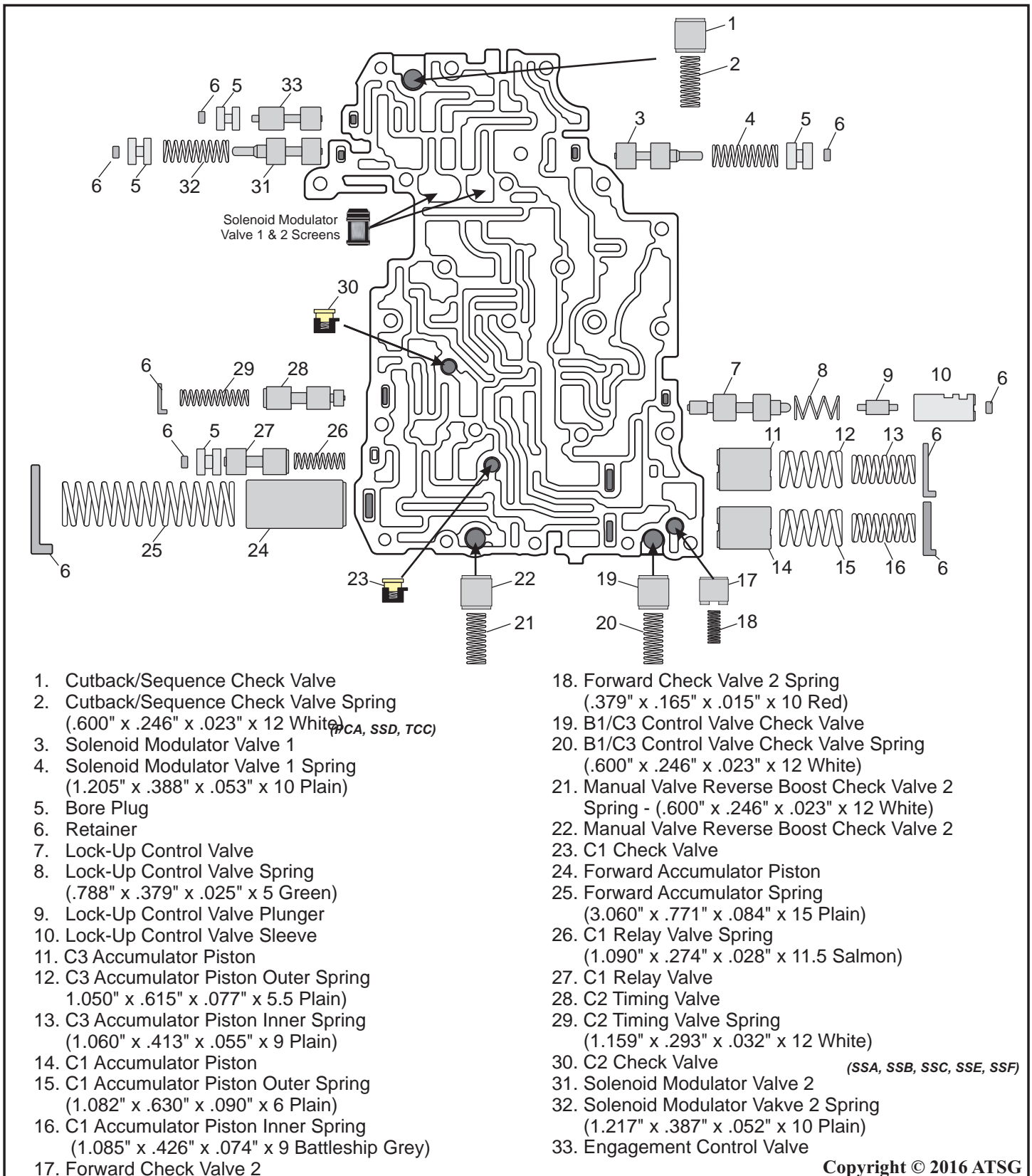
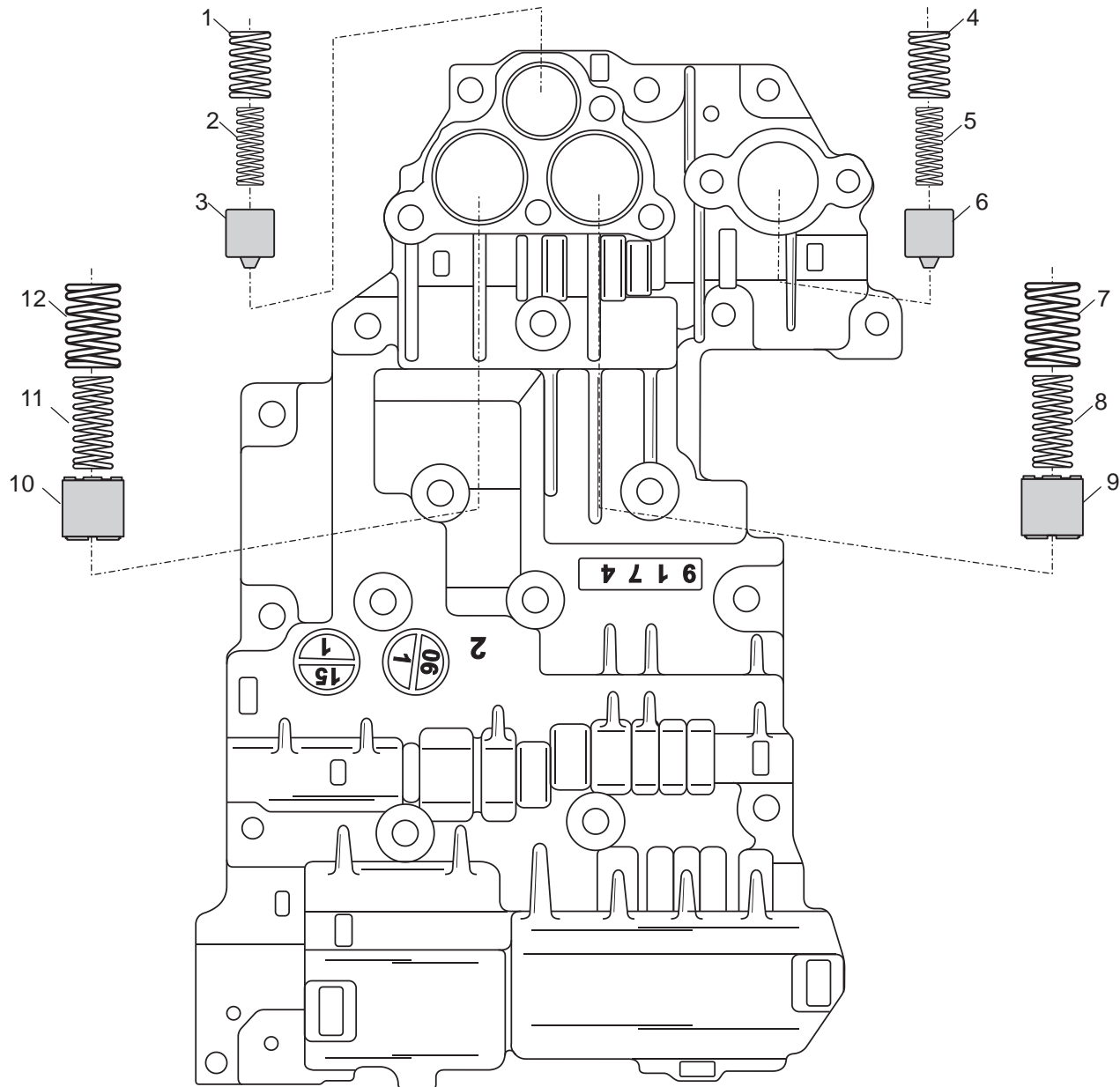


Figure 8



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|---|--|
| 1. Solenoid Modulating Valve 1 Accumulator Piston Outer Spring - (.948" x .478" x .074" x 7 Red) | 7. C2 Accumulator Piston Outer Spring (1.089" x .630" x .090" x 6 Plain) |
| 2. Solenoid Modulating Valve 1 Accumulator Piston Inner Spring - (.938" x .305" x .043" x 10 Red) | 8. C2 Accumulator Piston Inner Spring (1.089" x .430" x .075" x 9.5 Battleship Grey) |
| 3. Solenoid Modulating Valve 1 Accumulator Piston | 9. C2 Accumulator Piston |
| 4. Solenoid Modulating Valve 2 Accumulator Piston Outer Spring - (.948" x .478" x .074" x 7 Red) | 10. Line Pressure Control Accumulator Piston Outer Spring - (1.089" x .630" x .090" x 6 Plain) |
| 5. Solenoid Modulating Valve 2 Accumulator Piston Inner Spring - (.938" x .305" x .043" x 10 Red) | 11. Line Pressure Control Accumulator Piston Inner Spring - (1.089" x .430" x .075" x 9.5 B. G.) |
| 6. Solenoid Modulating Valve 2 Accumulator Piston | 12. Line Pressure Control Accumulator Piston |

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Figure 9