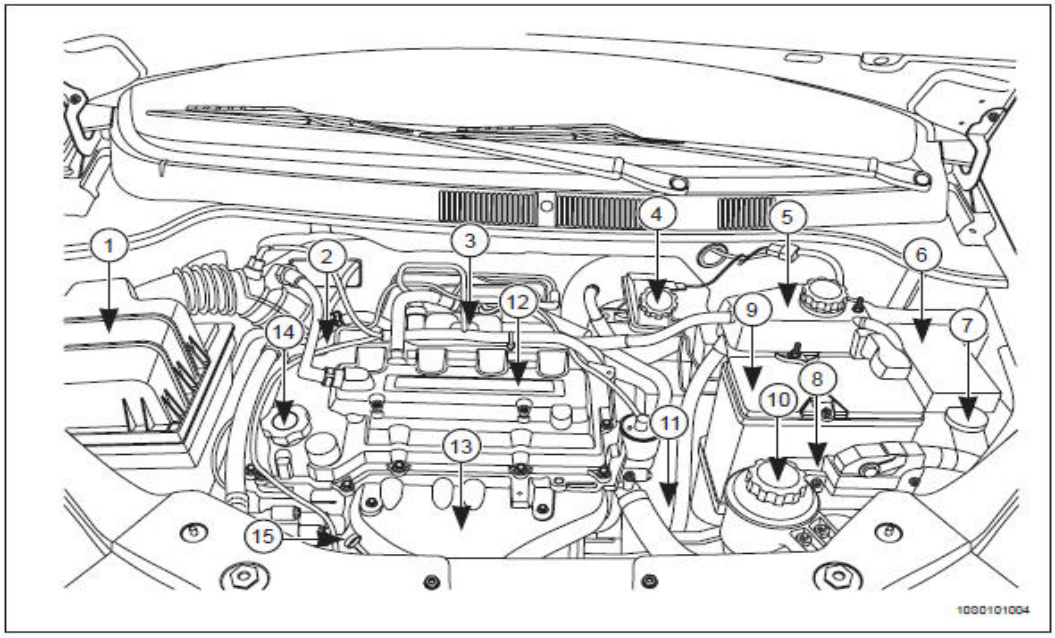
Table of Contents



1. Air Filter
2. Electronic Throttle
3. Intake Manifold
4. Brake Oil Tank
5. Engine Coolant Storage Tank
6. Fuse Box
7. Washing Liquid Storage Tank
8. Engine Control Module
9. Accumulator
10. Power Steering Fluid Storage Tank
11. Transmission
12. Ignition Coil Cap
13. Exhaust Manifold
14. Engine Oil Cap
15. Engine Oil Dipstick

1.2 Vehicle Fit-out Table

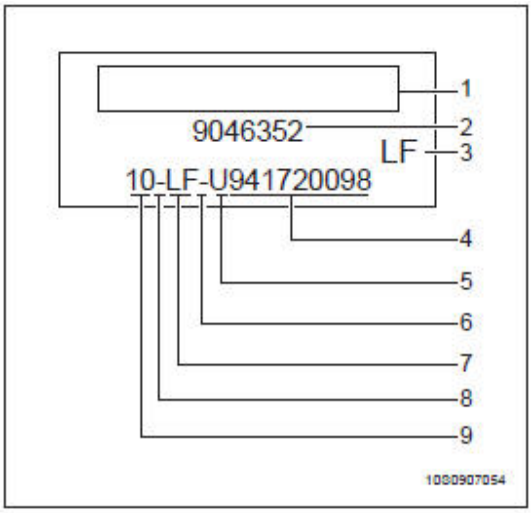
■ **Fit-out Table**

	MKT Type	1.2 SL MT	1.2 SE MT	1.2 SE EM T	1.4 SX MT	1.4 SX EM T	1.2 SL MT	1.2S EMT	1.2SE EMT	1.4 SX MT	1.4S X EM T
	Engine Model	1S R 69	1SS69		1ST69		1S R 48	1SS48		1ST48	
	Optional Type	NG S 1	NG S 2	NG S 3	NG S 4	NG S 5	NG S 6	NGS 7	NGS 8	NG S 9	NG S 10
Vehicle Body Color	Exterior: Primary Color, Cool Blue, MET	O	O	O	O	O					
	Exterior: Primary Color，Flame Red	O	O	O	O	O	O	O	O	O	O
	Exterior: Primary Color，Dynamic Orange	O	O	O	O	O	O	O	O	O	O
	Exterior: Primary Color，Bright White	O	O	O	O	O	O	O	O	O	O

■ **Identification of Engine Label**

Bar Code

2. Engine Assembly Number
3. Engine Code （1.4L LCU: LF, 1.2L LMU: LL）
4. Nine-Digit Serial Number
5. Engine Factory Code （Fixed Code: U）
6. Separative Sign
7. Engine Code （1.4L LCU: LF, 1.2L LMU: LL）
8. Separative Sign
9. Part identification number: engine number is 10.

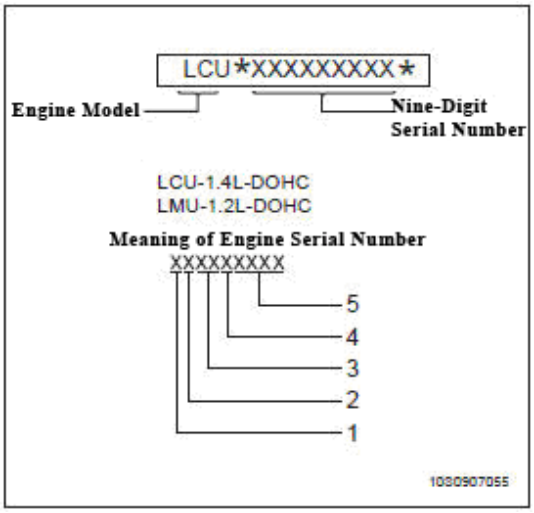


2.1.2 Significance of Engine Serial Number

1. Year Code
2. Month Code

   1-9: January - September; A: October;

   B: November; C: December
3. Date Code
4. Engine Production Line Code（Fixed Code:2）
5. Production Sequence Number(From 1 To 9999)



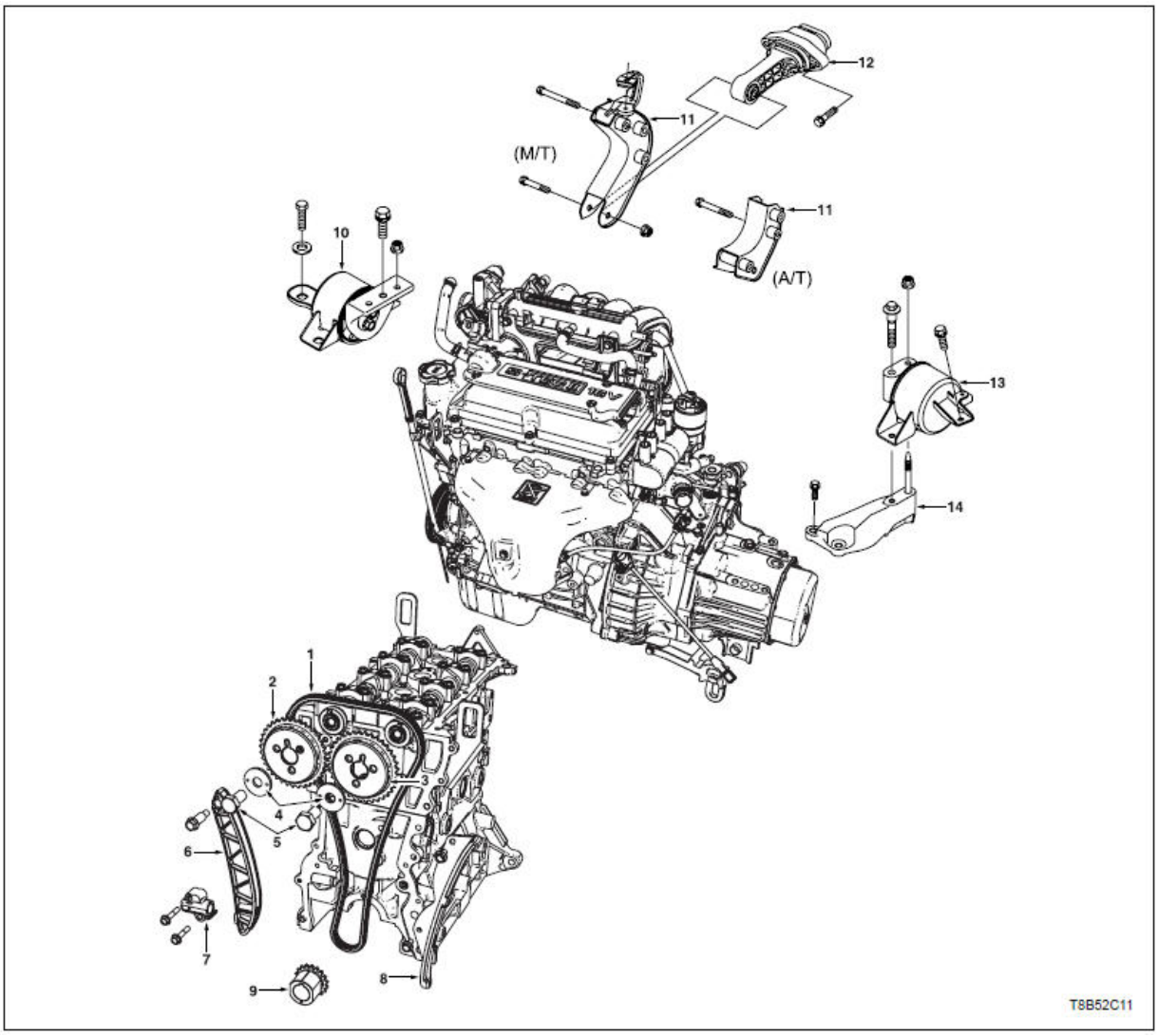
2.2 Engine Parameters

2.2.1 Engine Oil

Recommended Engine Oil		**API SM（ILSAC GF-IV） Grade: SAE 5W-30**
Volume	1.2L LMU	3.75L
	1.4L LCU	3.75L

2.2.2 Spark plugs

Engine Models	**Spark Plug Models**	**Spark Plug Gap**
1.4L Dual Overhead Camshaft	NGK BKR6E-11	1-1.1 mm （0.039-0.043 in.）



1. Timing Chain
2. Camshaft Sprocket （Air Intake）
3. Camshaft Sprocket （Exhaust）
4. Lining
5. Camshaft Sprocket fixing bolt
6. Timing Chain Rod
7. Timing Chain Tensioner
8. Timing Chain Guide Plate
9. Crankshaft Sprocket
10. Engine Support Assembly
11. Rear Support Bracket
12. Transmission Rear Support
13. Transmission Support Assembly
14. Transmission Support Bracket

2.3.2 1.4L LCU

■ **Cylinder Head**

- Idle air control valve is dismounted or replaced.
- Idle air control system encounters trouble.

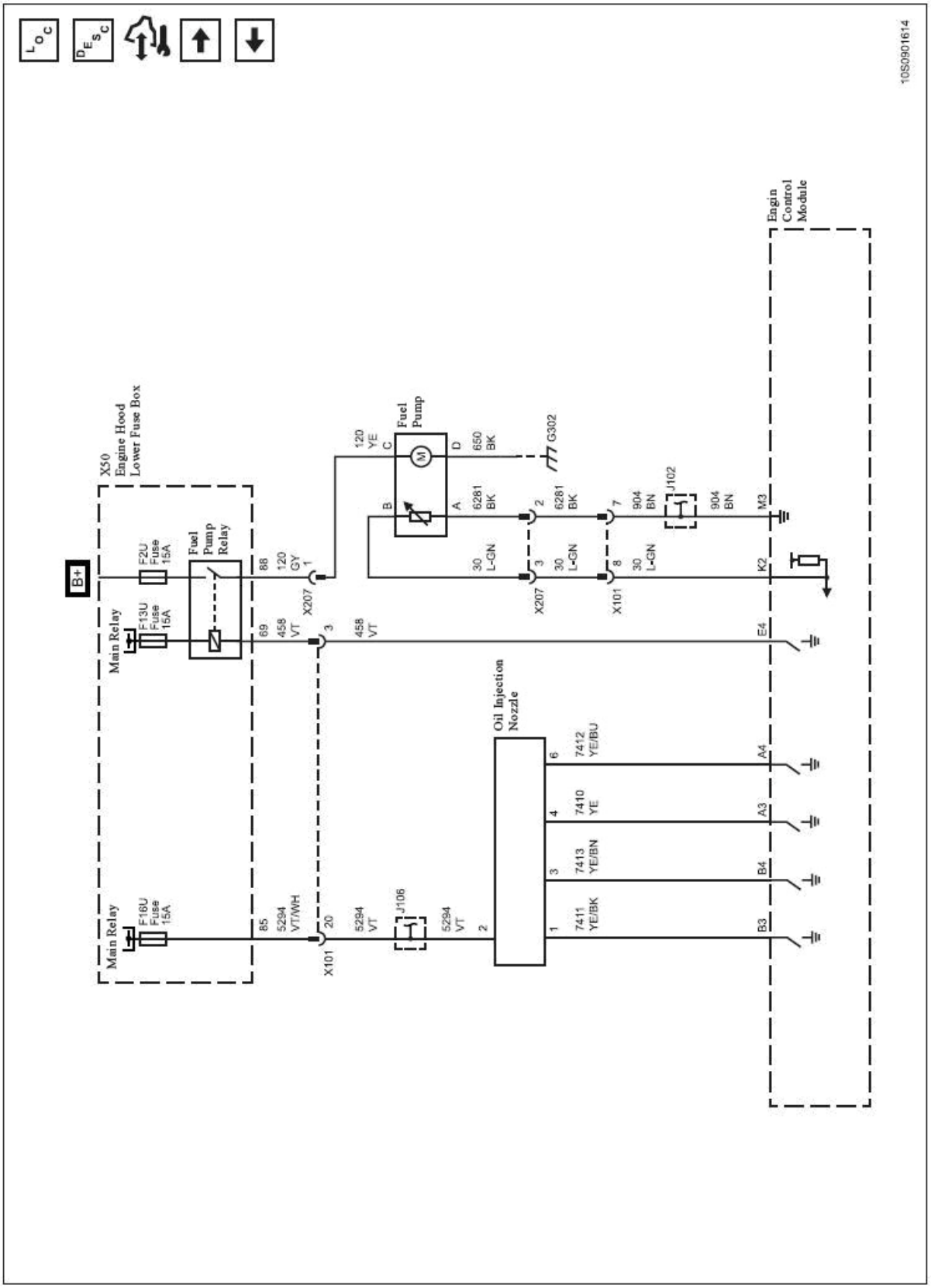
■ Program 1

1. Shut down all accessories.
2. Start the engine.
3. Maintain the engine in idle for 10 seconds.
4. Shut down the ignition switch for 1 minute.
5. Execute program 2

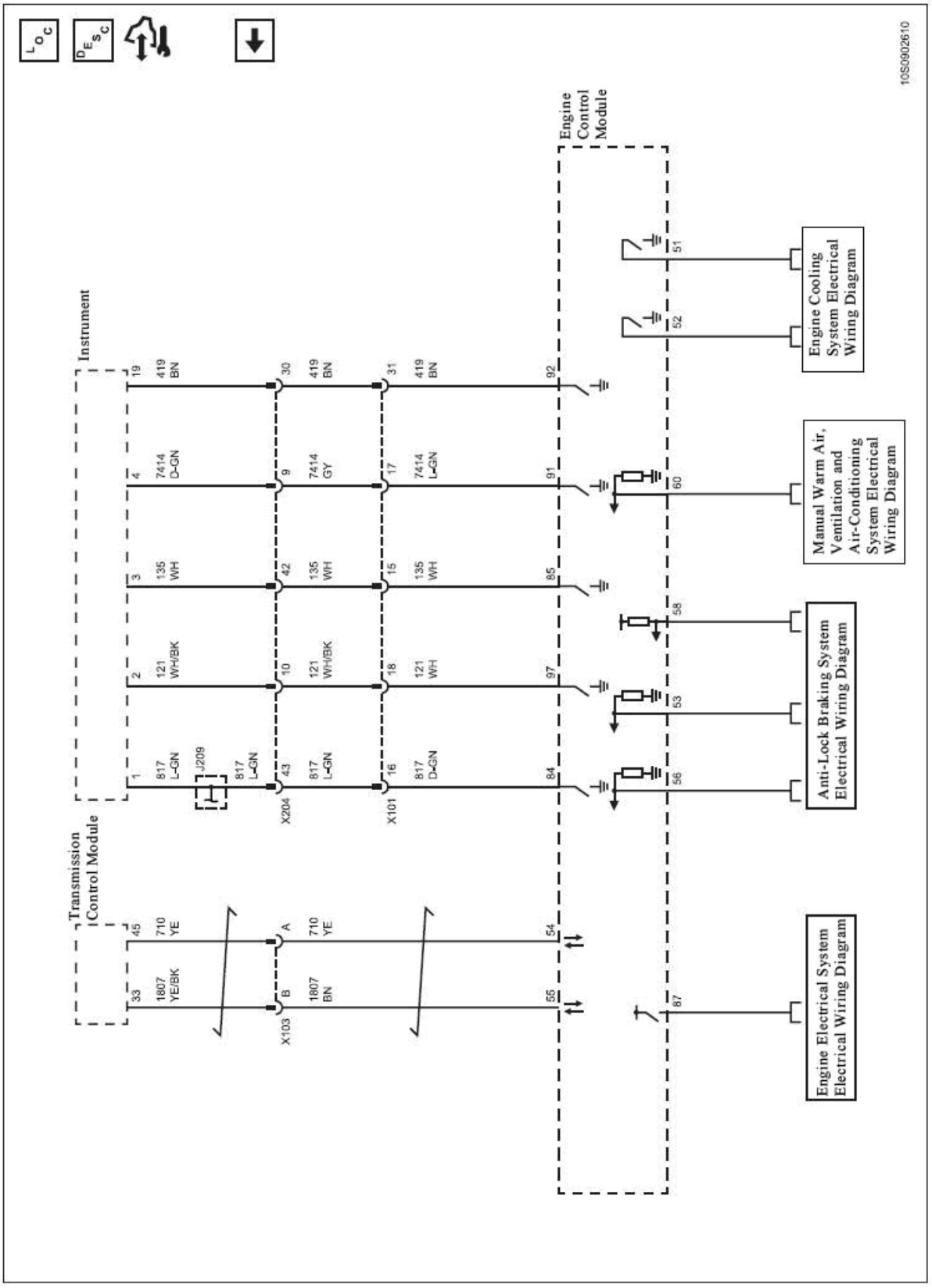
■ Program 2

- EMT
  - Run the engine until the engine coolant temperature is above 85°C （185°F）.
  - Maintain the engine in idle for 10 minutes.
  - Switch on the air conditioning （if equipped） for 1 minute.
  - Switch off the air conditioning （if equipped） for 1 minute.
  - Pull the hand brake up and shift the transmission into drive （D）.
  - Maintain the engine in idle for 1 minute.
  - Switch on the air conditioning （if equipped） for 1 minute.
  - Shut down the ignition switch. By now, the idle read-in program is complete.
- Manual Transmission
  - Run the engine until the engine coolant temperature is above 85°C （185°F）.
  - Maintain the engine in idle for 10 minutes.
  - Switch on the air conditioning （if equipped） for 1 minute.
  - Shut down the ignition switch. By now, the idle read-in program is complete.

2.6.9 Fuel Control System - Fuel Pump Control System and Oil Injector Schematic Diagram （1.2MT）



2.6.21 Controlled and Monitored Parts Schematic Diagram （1.4）



2. Differential Rear Bearing Adjusting Gasket

(If Equipped)

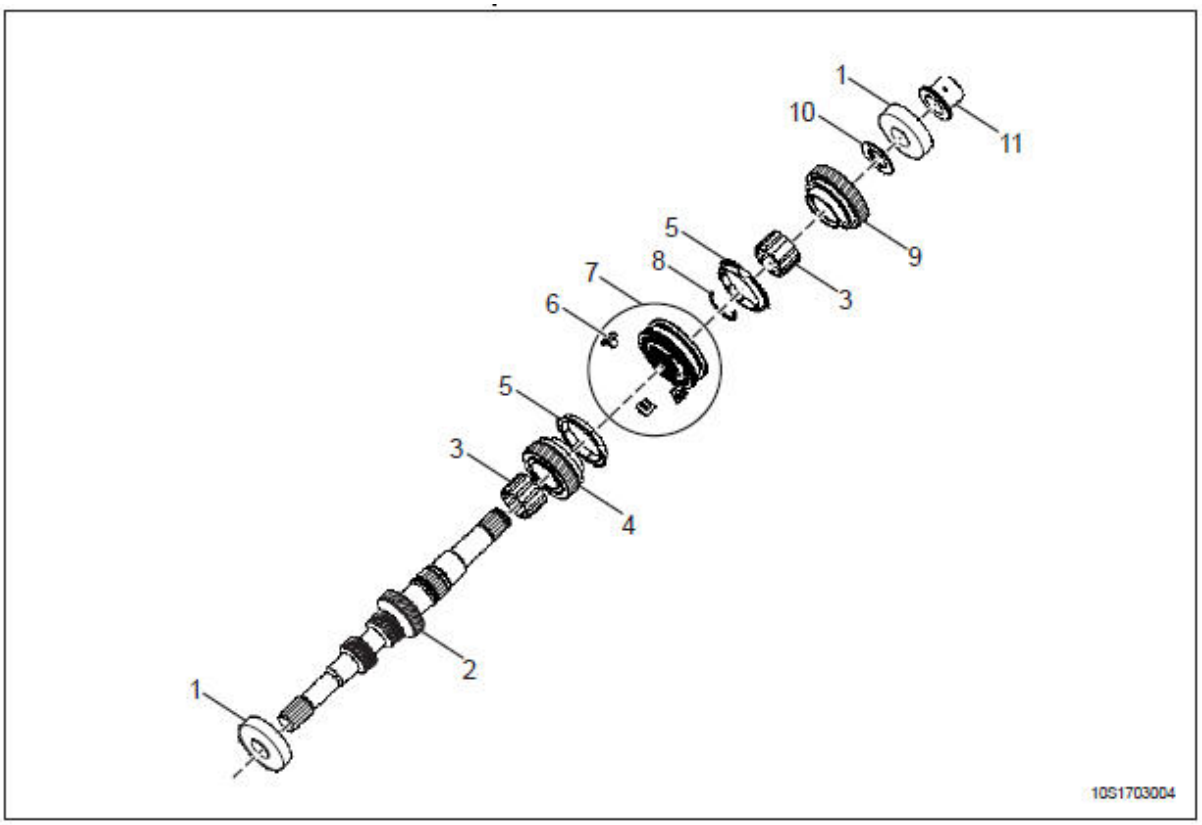
3. Output Shaft Assembly
4. Input Shaft Assembly
5. Reverse Gear Idler Nylon Washer
6. Reverse Gear Idler Assembly
7. Reverse Shaft
8. Reverse Gear Rocker Bolt
9. Reverse Gear Rocker Component
10. 5th-Reverse Gear Shift Fork Component
11. 3rd-4th Gear Shift Fork Component
12. 1st-2nd Gear Shift Fork Component
13. Self-Locking Bolt
14. Self-Locking Spring
15. Steel Ball
16. Front Housing Assembly
17. Output Shaft Rear Bearing Adjusting Gasket

(If Equipped)

(If Equipped)

19. Rear Bearing Baffle
20. Rear Bearing Baffle Screw
21. 3rd-4th-5th Gear Needle Bearing
22. 5th Driven Gear
23. 5th Driving Gear
24. Output Shaft Locknut
25. 3rd-4th-5th Gear Synchronizer Toothed Ring
26. 3rd-4th-5th Gear Synchronizer Slide Block
27. 5th Gear Synchronizer Assembly
28. Axle Retainer Ring (If Equipped)
29. Plug Screw Of The 5th Gear Shift Fork
30. Steel Ball
31. 5th Gear Shift Fork
32. Fixing Circlip
33. Spring Pin

3.4.6 SH63 Input Shaft

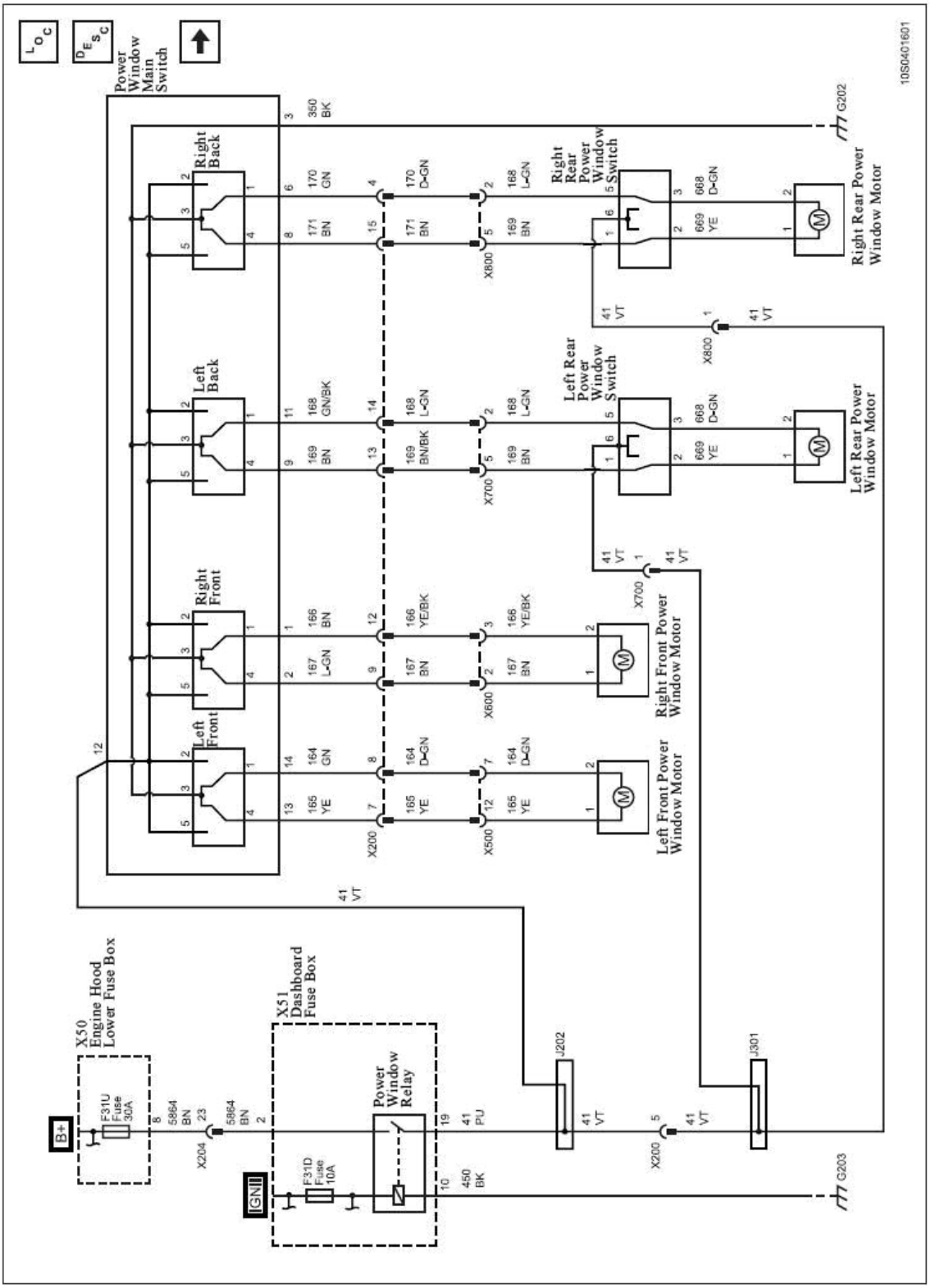


1. Input Shaft Bearing

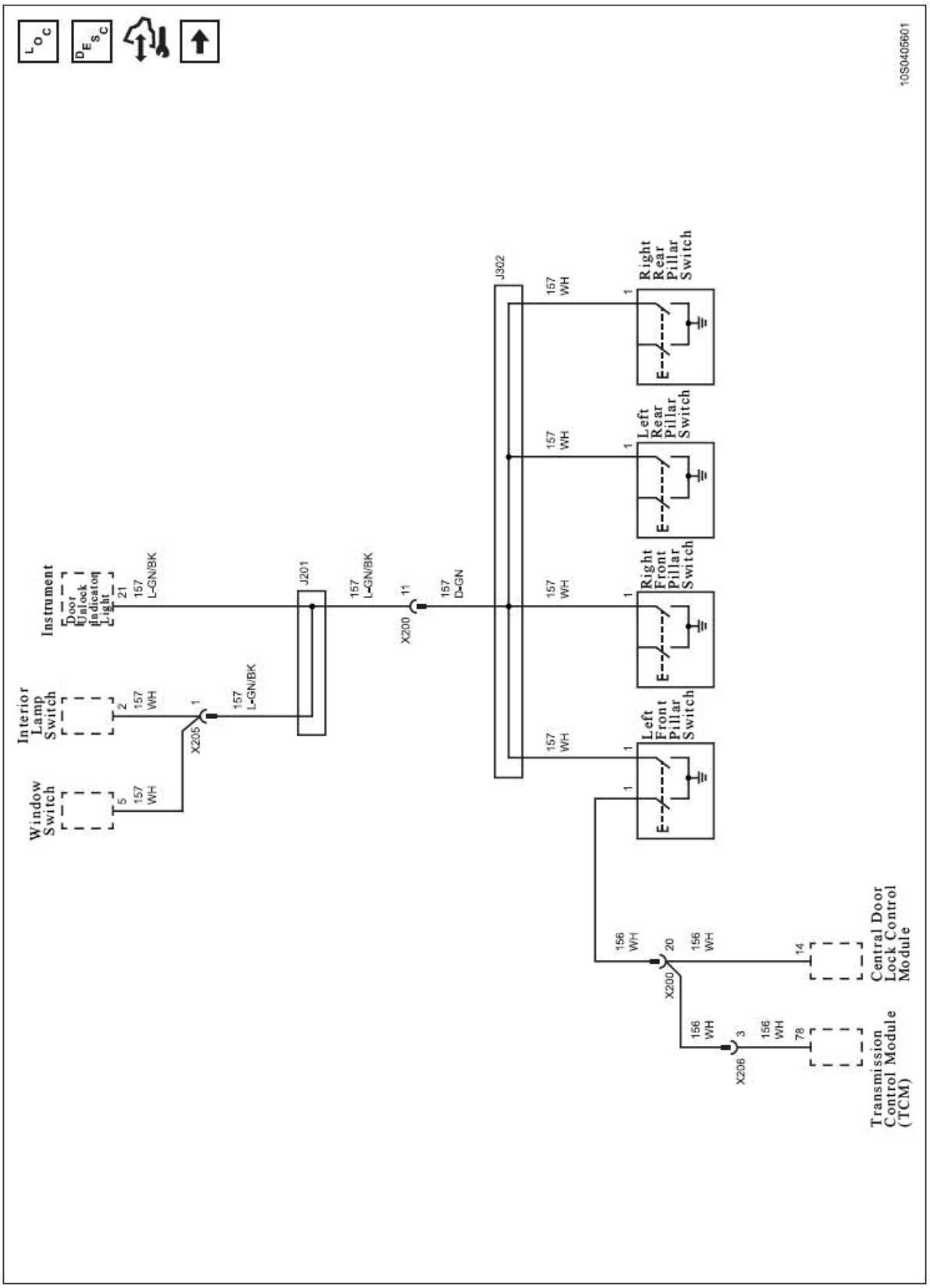
7. Synchronizer Assembly

4.7 Electrical Appliances Circuit Diagrams

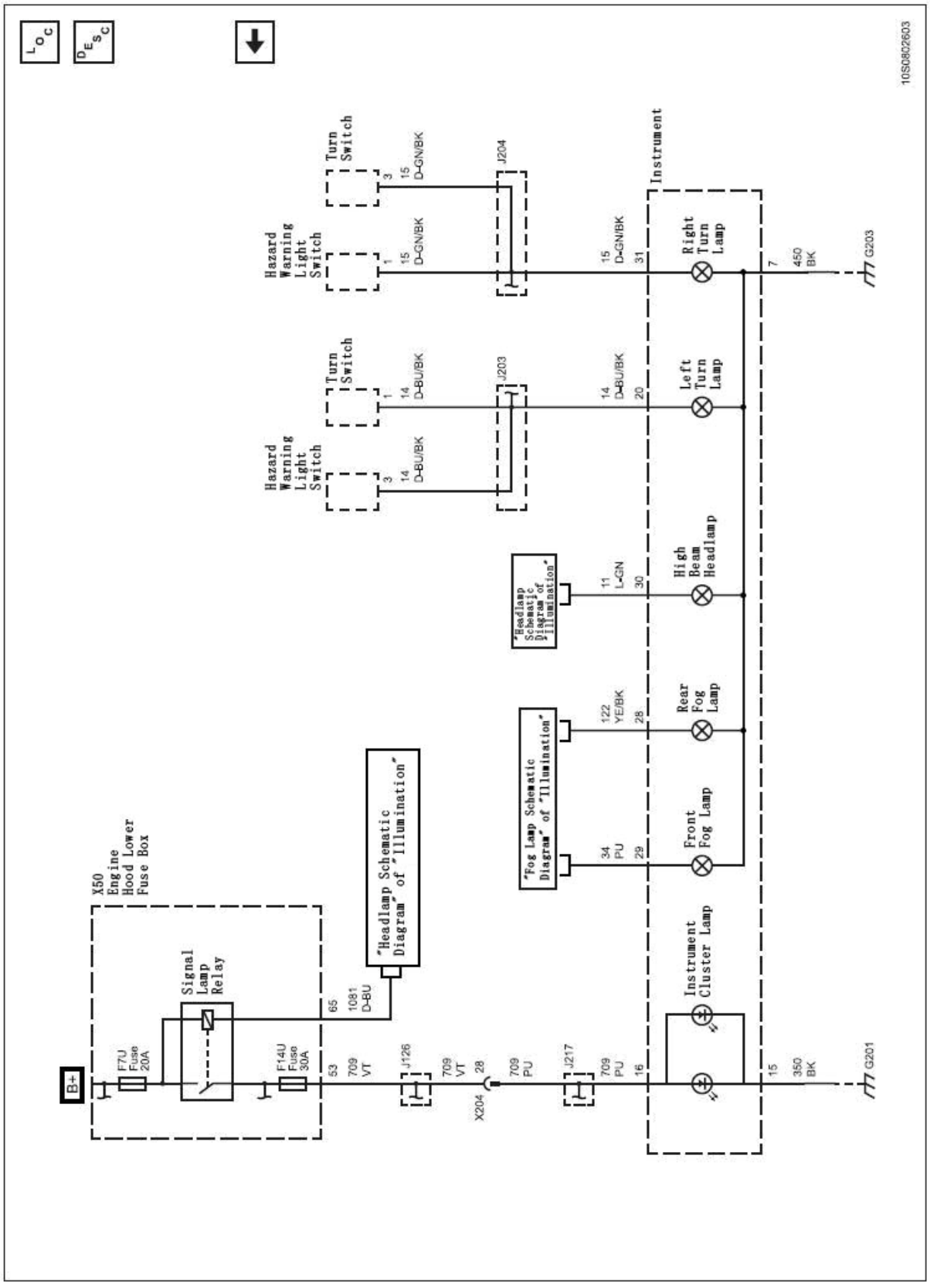
4.7.1 Power Windows Circuit Diagram 1



4.7.12 Door Pillar Switch Circuit Diagram



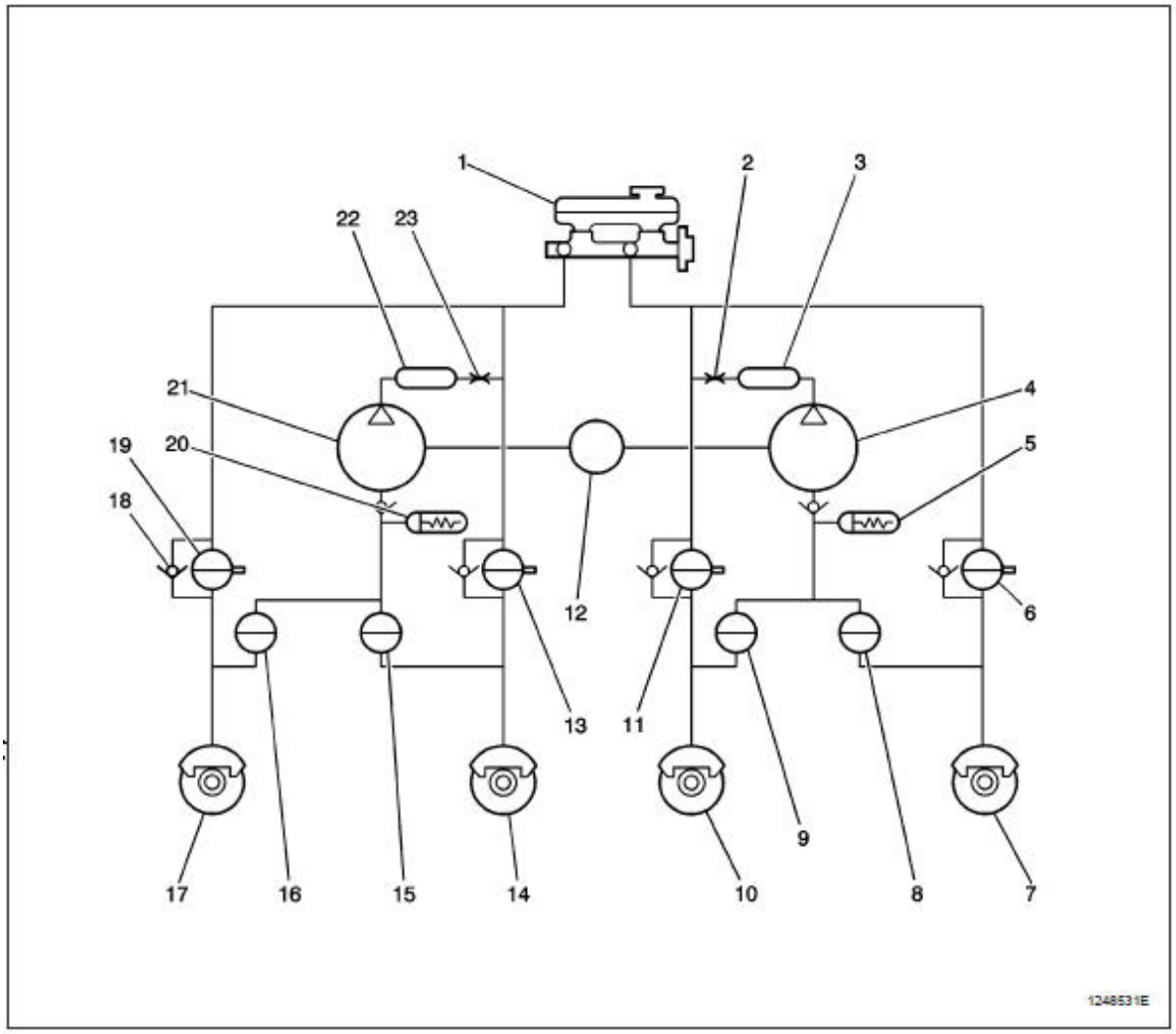
4.7.23 Instrument Indicator Lights and Illumination



4. Displacement Pump
5. Power Accumulator
6. Intake Valve
7. Right Rear Brake Caliper
8. Outlet Valve
9. Outlet Valve
10. Left Front Brake Caliper
11. Intake Valve
12. Motor
16. Outlet Valve
17. Left Rear Brake Caliper
18. Non-Return Valve
19. Intake Valve
20. Power Accumulator
21. Displacement Pump
22. Damper
23. Orifice

5.3.3 Anti-Lock Braking Mode - Maintenance

When the electronic brake control module detects wheel slip, it will close the intake valve and maintain the outlet valve in the brake pressure regulator valve as closed to isolate the system. In this way, the stability of the oil pressure in the brakes can be maintained so that there is no oil pressure rise and drop.



1. Master Cylinder
2. Orifice
3. Damper
13. Intake Valve
14. Right Front Brake Caliper
15. Outlet Valve