

Pressure Testing



⚠ WARNING

- While testing, be careful of the rotating front wheels.
- Make sure lifts, jacks, and safety stands are placed properly (see section 1).

CAUTION:

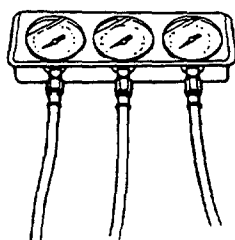
- Before testing, be sure the transmission fluid is filled to the proper level.
- Warm up the engine before testing.

1. Raise the car (see section 1).
2. Warm up the engine, then stop the engine and connect a tachometer.
3. Connect the oil pressure gauge to each inspection hole(s).

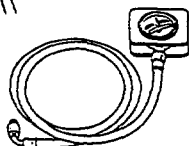
TORQUE: 18 N·m (1.8 kgf·m, 13 lbf·ft)

CAUTION: Connect the oil pressure gauge securely, be sure not to allow dust and other foreign particles to enter the inspection hole.

A/T OIL PRESSURE GAUGE SET
07406-0020004



A/T LOW PRESSURE GAUGE
07406-0070001



4. Start the engine and measure the respective pressure as follows.
 - Line Pressure
 - Clutch Pressure
 - Throttle A/Throttle B Pressure
 - Governor Pressure

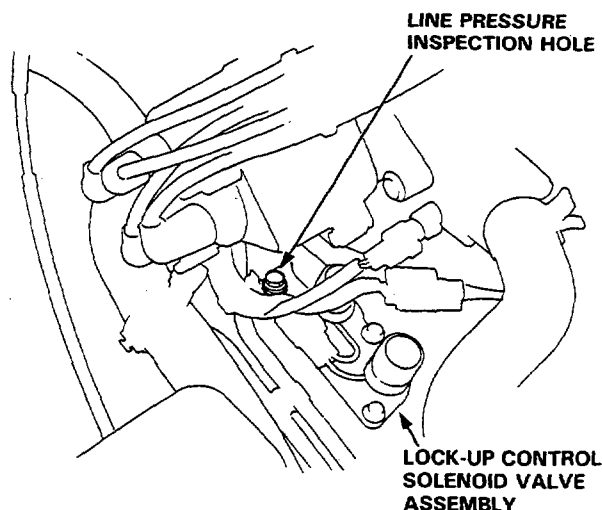
5. Install a new washer and the sealing bolt in the inspection hole and tighten to the specified torque.

TORQUE: 18 N·m (1.8 kgf·m, 13 lbf·ft)

NOTE: Do not reuse old aluminum washers.

• Line Pressure

- 1. Set the parking brake and block both rear wheels securely.
- 2. Run the engine at 2,000 rpm (min^{-1}).
- 3. Shift the shift lever to **N** or **P** position.
- 4. Measure line pressure.



PRESSURE	SHIFT LEVER POSITION	SYMPTOM	PROBABLE CAUSE	FLUID PRESSURE		
					Standard	Service Limit
Line	N or P	No (or low) line pressure	Torque converter, oil pump, pressure regulator, torque converter check valve	D14A2 Engine	780–830 kPa (8.0–8.5 kgf/cm ² 110–120 psi)	740 kPa (7.5 kgf/cm ² 110 psi)
				D16Y3 Engine	830–880 kPa (8.5–9.0 kgf/cm ² 120–130 psi)	780 kPa (8.0 kgf/cm ² 110 psi)

NOTE: Higher pressures may be indicated if measurements are made in shift lever positions other than **N** or **P** position.

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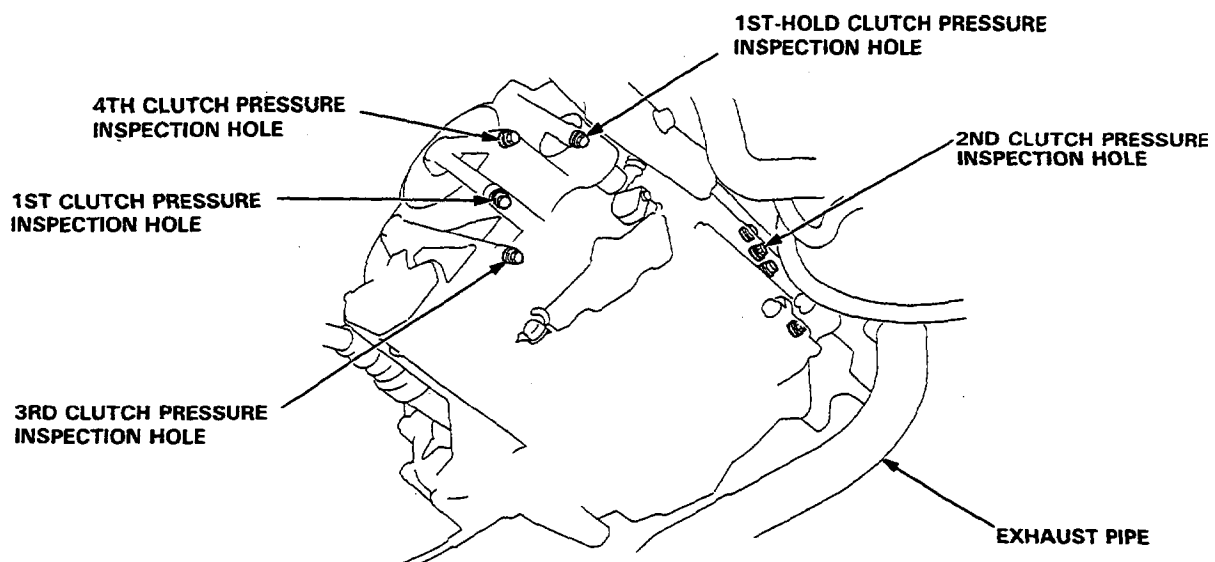
Pressure Testing

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● Clutch Pressure Measurement

⚠ WARNING While testing, be careful of the rotating front wheels.

- 1. Set the parking brake and block both rear wheels securely.
- 2. Raise the front of the car and support them with safety stands.
- 3. Allow the front wheels to rotate freely.
- 4. Run the engine at 2,000 rpm (min^{-1}).
- 5. Measure each clutch pressure.





D14A2 Engine

PRESSURE	SHIFT LEVER POSITION	SYMPTOM	PROBABLE CAUSE	FLUID PRESSURE	
				Standard	Service Limit
1st Clutch	1 or D4	No or low 1st pressure	1st Clutch	780–830 kPa (8.0–8.5 kgf/cm ² , 110–120 psi)	740 kPa (7.5 kgf/cm ² , 110 psi)
1st-hold Clutch	1	No or low 1st-hold pressure	1st-hold Clutch		
2nd Clutch	2	No or low 2nd pressure	2nd Clutch		
2nd Clutch	D4	No or low 2nd pressure	2nd Clutch	390 kPa (4.0 kgf/cm ² , 57 psi) throttle control drum fully closed 780–830 kPa (8.0–8.5 kgf/cm ² , 110–120 psi) throttle control drum more than 1/8 opened	340 kPa (3.5 kgf/cm ² , 50 psi) throttle control drum fully closed 740 kPa (7.5 kgf/cm ² , 110 psi) throttle control drum more than 1/8 opened
3rd Clutch		No or low 3rd pressure	3rd Clutch		
4th Clutch		No or low 4th pressure	4th Clutch		
	R		Servo Valve or 4th Clutch	780–830 kPa (8.0–8.5 kgf/cm ² , 110–120 psi)	740 kPa (7.5 kgf/cm ² , 110 psi)

D16Y3 Engine

PRESSURE	SHIFT LEVER POSITION	SYMPTOM	PROBABLE CAUSE	FLUID PRESSURE	
				Standard	Service Limit
1st Clutch	1 or D4	No or low 1st pressure	1st Clutch	830–880 kPa (8.5–9.0 kgf/cm ² , 120–130 psi)	780 kPa (8.0 kgf/cm ² , 110 psi)
1st-hold Clutch	1	No or low 1st-hold pressure	1st-hold Clutch		
2nd Clutch	2	No or low 2nd pressure	2nd Clutch		
2nd Clutch	D4	No or low 2nd pressure	2nd Clutch	390 kPa (4.0 kgf/cm ² , 57 psi) throttle control drum fully closed 830–880 kPa (8.5–9.0 kgf/cm ² , 120–130 psi) throttle control drum more than 1/8 opened	340 kPa (3.5 kgf/cm ² , 50 psi) throttle control drum fully closed 780 kPa (8.0 kgf/cm ² , 110 psi) throttle control drum more than 1/8 opened
3rd Clutch		No or low 3rd pressure	3rd Clutch		
4th Clutch		No or low 4th pressure	4th Clutch		
	R		Servo Valve or 4th Clutch	830–880 kPa (8.5–9.0 kgf/cm ² , 120–130 psi)	780 kPa (8.0 kgf/cm ² , 110 psi)

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Pressure Testing

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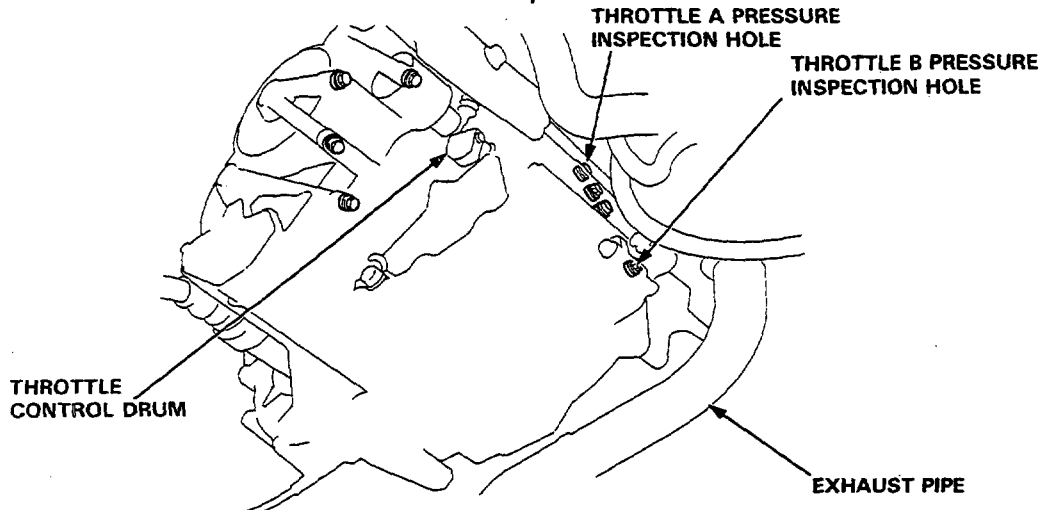
● Throttle A/Throttle B Pressure Measurement

⚠ WARNING While testing, be careful of the rotating front wheels.

- 1. Allow the front wheels to rotate freely.
- 2. Remove the cable end of the throttle control cable from the throttle control drum.

NOTE: Do not loosen the locknuts, simply unhook the cable end.

- 3. Shift to **D₄** or **D₃** position.
- 4. Run the engine at 1,000 rpm (min^{-1}).
- 5. Measure full-closed throttle A/B pressure.
- 6. Move the throttle control drum to full-opened throttle position.
- 7. Measure full-opened throttle A/B pressure.



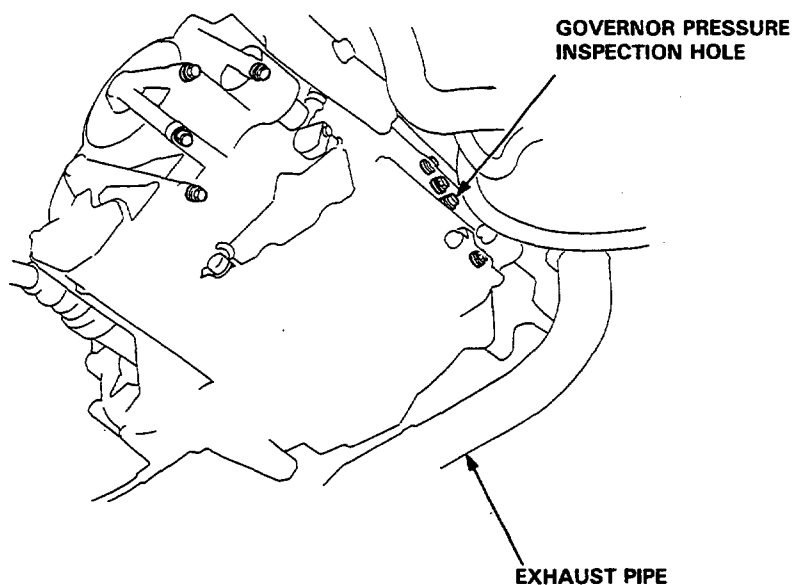
PRESSURE	SHIFT LEVER POSITION	SYMPTOM	PROBABLE CAUSE	FLUID PRESSURE	
				Standard	Service Limit
Throttle A	D₄ or D₃	Pressure too high	Throttle valve A Modulator Valve	0—15 kPa (0—0.15 kgf/cm ² , 0—2.1 psi) throttle control drum fully closed	—
		No or low Throttle A pressure		D14A2 Engine 456—470 kPa (4.65—4.8 kgf/cm ² , 66.1—68 psi) throttle control drum fully opened	450 kPa (4.6 kgf/cm ² , 65psi) throttle control drum fully opened
				D16Y3 Engine 476—490 kPa (4.85—5.0 kgf/cm ² , 69.0—70 psi) throttle control drum fully opened	470 kPa (4.8 kgf/cm ² , 68 psi) throttle control drum fully opened
Throttle B	D₄ or D₃	Pressure too high	Throttle Valve B	0—15 kPa (0—0.15 kgf/cm ² , 0—2.1 psi) throttle control drum fully closed	—
		No or low Throttle B pressure		D14A2 Engine 780—830 kPa (8.0—8.5 kgf/cm ² , 110—120 psi) throttle control drum fully opened	740 kPa (7.5 kgf/cm ² , 110 psi) throttle control drum fully opened
				D16Y3 Engine 830—880 kPa (8.5—9.0 kgf/cm ² , 120—130 psi) throttle control drum fully opened	780 kPa (8.0 kgf/cm ² , 110 psi) throttle control drum fully opened



● Governor Pressure Measurement

⚠ WARNING While testing, be careful of the rotating front wheels.

- 1. Allow the front wheels to rotate freely.
- 2. Run the vehicle at 38 mph (60 km/h).
- 3. Measure the governor pressure.



PRESSURE	SHIFT LEVER POSITION	SYMPTOM	PROBABLE CAUSE	FLUID PRESSURE		
					Standard	Service Limit
Governor	D ₄ or D ₃	No or low governor pressure	Governor Valve	D14A2 Engine	180–190 kPa (1.84–1.94 kgf/cm ² , 26.2–27.6 psi)	176 kPa (1.79 kgf/cm ² , 25.5 psi)
				D16Y3 Engine	179–189 kPa (1.83–1.93 kgf/cm ² , 26.0–27.4 psi)	175 kPa (1.78 kgf/cm ² , 25.3 psi)