

BRAKES

SECTION 00
SERVICE INFORMATION

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TROUBLESHOOTING

Brake System

PROBLEM	POSSIBLE CAUSE	CORRECTION
No Brakes	1. Restricted tubing or hose. 2. Brakes out of adjustment. 3. No fluid.	1. Replace defective parts. 2. Adjust. 3. Fill the reservoir with brake fluid.
Insufficient Brakes	1. Pedal improperly adjusted. 2. Worn linings/pads or drum/discs. 3. Plugged, crimped, restricted lines or hoses.	1. Adjust. 2. Replace as necessary. 3. Repair or replace.
Slow Brake Application	1. Pedal binding. 2. Wheel cylinder piston sticking. 3. Restriction in the lines. 4. Worn linings/pads or drums/discs.	1. Lubricate pivot pin, clean-check for foreign objects. 2. Repair the wheel cylinder. 3. Remove the restriction or replace the line. 4. Replace as necessary.
Uneven Braking (Front or Rear Brakes not Working)	1. Damaged hydraulic lines. 2. No brake fluid at the master cylinder. 3. Safety valve not opened.	1. Repair or replace. 2. Check for plugged, kinked or damaged hose to the reservoir. 3. Correct.
Wet Weather: Brakes Grab or won't Hold	1. Linings too sensitive to water. 2. Dirty brakes. 3. Bent mounting plate - opening. 4. Scored drums/discs.	1. Replace in axle sets. 2. Clean out. 3. Replace. 4. Machine in pairs. Replace if necessary.
Brakes Squeak	1. Mounting plate bent or shoes twisted. 2. Metallic particles or dust imbedded in the lining. 3. Lining rivets loose or lining not held tightly against the shoe at the ends. 4. Drums distorted tampered, or not Square. 5. Incorrect lining/pad. 6. Mixed size linings. 7. Weak or broken return spring. 8. Loose wheel bearings. 9. Loose mounting plate, drum, wheel cylinder. 10. Linings/pads located wrong on the shoes. 11. Linings/pads worn out. 12. Lining glazed. 13. Cracked or threaded drums/discs.	1. Replace damaged parts. 2. Replace the linings/pads in axle sets. 3. Replace the rivets and/or tighten the lining by riveting. 4. Machine or replace drums/discs. 5. Replace the linings/pads in axle sets. 6. Use all standard or oversize linings in a brake. 7. Replace the return spring. 8. Tighten to the proper setting. 9. Tighten. 10. Install the linings correctly. 11. Reline the brakes. 12. Replace. 13. Replace in axle pairs.

PROBLEM	POSSIBLE CAUSE	CORRECTION
Brakes Chatter	1. Incorrect lining/pad to drum/disc clearance. 2. Loose mounting plate. 3. Grease, fluid, road dust on the lining pad. 4. Weak or broken return spring. 5. Loose wheel bearings. 6. Drums out-of-round. 7. Discs warped. 8. Cocked or distorted shoes. 9. Distorted, tapered, or barrel- shaped drums. 10. Incorrect lining/pad material. 11. Linings/pads worn out. 12. Lining loose on the shoes. 13. Foreign material imbedded in the linings/pads. 14. Cracked or threaded drums/discs.	1. Adjust to specification. 2. Tighten securely. 3. Clean or reline. 4. Replace the return spring. 5. Readjust. 6. Machine the drums in axle sets. 7. Machine the discs in axle sets. 8. Straighten or replace. 9. Machine drums in pairs. Replace if necessary. 10. Reline with correct linings/pads. 11. Reline the brake. 12. Rivet the linings to the shoes. Replace if necessary. Check for damaged or distorted shoes. 13. Replace the linings/pads in axle sets. 14. Replace in axle pairs.
Shoe Click	1. Return spring weak. 2. Shoe bent.	1. Replace the spring. 2. Straighten or replace.
Noise and Chatter Squealing, clicking, or scraping sound upon brake application	1. Bent, damaged or incorrect shoes. 2. Worn out lining/pad. 3. Foreign material embedded in the lining/pad. 4. Broken shoe return spring. 5. Cracked or threaded drums/discs (lathe marks).	1. Replace with the correct shoes and lining. Always replace in axle sets. 2. Replace the shoes and lining/pad in axle sets. 3. Replace the shoes and lining/pad in axle sets. 4. Replace the return spring. 5. Replace the drums/discs in axle sets.
Pulls to One Side	1. Grease or fluid soaked lining/pad. 2. Loose wheel bearings, loose (or distorted) mounting plate on the rear or front axle or loose spring bolts. 3. Linings/pads not of the recommended kind. 4. Tires not properly or evenly inflated or unequal wear of tread. Different tread non-skid design. 5. Water, mud, etc., in the brakes.	1. Replace in axle sets. 2. Adjust the wheel bearing, tighten (or replace) the mounting plate to the axle and tighten the spring bolts. 3. Install recommended linings/pads. Install the shoes correctly. 4. Inflate the tires to recommended pressures. Rearrange the tires so that a pair of non-skid tread surfaces of similar design and equal wear will be installed on the front wheels, and an other pair with like tread will be installed on the rear wheels. 5. Remove any foreign material from all of the brake parts and inside of the drums.

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PROBLEM	POSSIBLE CAUSE	CORRECTION
Pulls to One Side (Cont.)	6. Wheel cylinder sticking. 7. Weak or broken shoe return spring. 8. Out-of-round drums or different sized drums on the same axle. 9. Brake dragging. 10. Weak chassis springs, loose U-bolts, loose steering gear, etc. 11. Loose steering. 12. Unequal camber. 13. Restricted brake line or hose. 14. Wheel cylinder size different on opposite sides. 15. Loose kingpin. 16. Distorted, damaged, or scored drum/disc. 17. Front end alignment. 18. Excessively worn lining/pad. 19. Uneven adjustment of brake lining clearance. 20. Water/wet linings.	6. Repair or replace the wheel cylinder. 7. Check the spring-replace distorted, open coiled, or cracked spring. 8. Refinish or replace the drums in axle pairs. 9. Check for loose lining. Adjust. (Refer to "Dragging Brakes".) 10. Replace the spring, tighten the U-bolts, adjust the steering gear, etc. 11. Repair and adjust. 12. Adjust to specifications. 13. Check for soft hose or damaged lines. Replace as necessary. 14. Replace with correct cylinders. 15. Replace the kingpins or bushing. 16. Refinish the drums/discs in axle pairs. Replace if necessary. 17. Align the front end. 18. Replace in axle sets. 19. Adjust the brake lining clearance in all wheels. 20. Apply the brakes a few times while moving at a slow speed to dry the linings.
One Wheel Locks	1. Gummy lining/pad. 2. Tire tread slick. 3. Brake adjustment not correct. 4. Restricted brake line or hoses. 5. Incorrect linings/pads. 6. Grease or fluid soaked lining/pads. 7. Foreign material in the brakes.	1. Replace in axle sets. 2. Match up tire treads from side to side. 3. Adjust the brakes. 4. Check for soft hoses or damaged lines. Replace as necessary. 5. Replace. Linings/pads must be the same on the axle. 6. Replace in axle sets. 7. Remove the material.
Light Pedal Pressure Brakes too Severe (Grabby Brakes)	1. Brake adjustment not correct. 2. Loose mounting plate on the front axle. 3. A small amount of grease or fluid on the lining/pad. 4. Incorrect lining/pad. 5. Wheel bearings loose. 6. Lining loose on the shoe. 7. Excessive dust and dirt in the drum. 8. Out-of-round drum.	1. Adjust the brakes. 2. Tighten the plates. 3. Replace the linings/pads. 4. Install factory specified linings/pads. 5. Adjust the wheel bearings. 6. Replace the lining or the shoe and lining. 7. Clean and sand the drums and linings. 8. Turn the drums in pairs or replace.

PROBLEM	POSSIBLE CAUSE	CORRECTION
Low Pedal or Pedal Goes to Floor	1. Excessive clearance between the linings and drum. 2. Pedal stop not adjusted, or missing. 3. Weak brake hose. 4. Leaking wheel cylinder. 5. Air in the hydraulic system. 6. Improper brake fluid (low boiling point). 7. Low fluid level. 8. Bent or distorted brake shoes. 9. Leaks at hydraulic line connections.	1. Adjust the brakes. 2. Adjust or install the pedal stop. 3. Replace with new hose. 4. Clean and rebuild. 5. Bleed the hydraulic system. 6. Flush the system and refill with recommended brake fluid. 7. Fill the reservoir with brake fluid; check for leaks and bleed system. 8. Replace in axle sets. 9. Check for hydraulic leaks and repair.
Slow Brake Release	1. Foot pedal binding. 2. Restriction in the line. 3. Weak shoe return spring.	1. Lubricate the pivot pin; clean-check for foreign objects. 2. Remove the restriction or replace line. 3. Replace the spring.
Poor Assist or Loss of Assist	1. Low brake fluid level. 2. Air in the hydraulic system. 3. Weak brake hose. 4. Loss of vacuum. 5. No brake fluid at the master cylinder.	1. Fill the reservoir to the proper level. Bleed the system. 2. Locate the source of the air leak and repair. Bleed the system. 3. Replace. 4. Inspect for vacuum leaks or malfunctioning pump. Repair or replace as necessary. 5. Check for plugged, kinked, or damaged hose to the reservoir.
Brake Fade	1. Incorrect lining/pad. 2. Poor lining/pad contact. 3. Thin drum. 4. Dragging brakes. 5. All conditions listed under "Pulls to One Side".	1. Replace with recommended lining/pad. 2. Grind the lining/pad to the proper radius; adjust. 3. Replace the drum. 4. Adjust. 5. All corrections listed under "Pulls to One Side".
All Brakes Drag when Adjustment is Known to be Correct	1. Pedal does not return to stop. 2. Improper fluid. 3. Use of incorrect rubber parts.	1. Lubricate the pedal linkage; adjust the pedal. 2. Replace rubber parts and fill with the recommended brake fluid. 3. Install the proper parts.

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PROBLEM	POSSIBLE CAUSE	CORRECTION
One Wheel Drags	1. Weak or broken shoe return spring. 2. Brake shoe to drum clearance too small. 3. Loose wheel bearings. 4. Wheel cylinder piston cups swollen and distorted or piston stuck. 5. Pistons sticking in the wheel cylinder. 6. Drum out-of-round. 7. Disc warped. 8. Restricted brake line or hose. 9. Distorted shoe. 10. Defective lining/pad. 11. Loose or bent mounting plate. 12. Loose calipers.	1. Replace the return spring. 2. Adjust to specification. 3. Adjust or replace the wheel bearings. 4. Rebuild the cylinders. Flush the hydraulic system and fill with recommended fluid. 5. Clean or replace the pistons; clean the cylinder bore. 6. Machine the drum. 7. Machine the disc. 8. Check for soft hoses or damaged lines. Replace as necessary. 9. Replace. 10. Replace with the recommended lining/pad. 11. Tighten the fasteners; replace the plate. 12. Tighten the fasteners.
Dragging Brakes	1. Improper fluid. 2. Brake pedal adjustment incorrect. 3. Incorrect shoe return spring. 4. Brake pedal linkage interference or binding. 5. Incorrect lining/pad. 6. All conditions listed under "One Wheel Drags".	1. Flush the hydraulic system and fill with recommended brake fluid, and replace rubber components. 2. Adjust the pedal. 3. Replace the shoe return spring. 4. Free the linkage and lubricate. 5. Replace the linings/pads. 6. All corrections under "One Wheel Drags".

Hydraulic Booster

PROBLEM	POSSIBLE CAUSE	CORRECTION
Large force pressing on the brake pedal (boosting insufficient)	1. Booster operation insufficient • Large internal leakage • Sticking of the spool valve • Insufficient sliding around the input and output rods	• With the engine on, press the brake pedal repeatedly, and confirm the presence of manual operation. With regard to manual operation, turn the engine off, and judge whether the pedal is as stiff and its play is as small as when the pedal is pressed repeatedly ten times or more. • When there is manual operation, the hydro boost assembly is replaced.
Brake dragging	1. Bad dimensions of the booster • The amount of protrusion of the output rod is large	• Confirm whether the amount of protrusion of the output rod (the distance from surface of the master cylinder attachment flange to the end of the rod) is no greater than 18.2 mm (0.717 in). • If the above dimension is outside the range, replace the hydro boost assembly.
	2. Bad pedal circumference attachment dimensions • Clevis position dimension is large	• Confirm whether the clevis position dimension (the distance from surface of the vehicle attachment flange to the center of the clevis center) is in the range 109 ± 1 mm (4.29 ± 0.04 in). • If the above dimension is outside the range, loosen the lock nut and adjust the clevis position dimension to be inside the above range. After making this adjustment, be sure to securely tighten the lock nut and to do a stop light switch reconfirmation.
	3. Booster return is bad • Input-output rod circumference sticks • Bad spool valve operation	• With the engine on, repeatedly press the brake pedal and confirm the pedal return state. • If the pedal does not return, replace the hydro boost assembly as necessary.
Oil leakage	1. Hydro boost assembly external leakage • Leakage from the seal material	• If the oil leakage is caused by looseness in the piping connections, retighten the connections. • If there is oil leakage from the connections of the accumulator, replace the affected seals of the connections with new seals. • If there is any oil leakage from parts other than the above that are included in the hydro boost assembly, replace the hydro boost assembly or the repair setting parts (accumulator).

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PROBLEM	POSSIBLE CAUSE	CORRECTION
Bad brake operation (lack of smoothness in operation)	1. Poor operation of the booster • Input-output rod circumference sticks • Bad spool valve operation	• With the engine on, repeatedly press the brake pedal and confirm the pedal operation state. • If there is sticking or some other abnormality in the pedal operation, replace the hydro boost assembly as necessary.
Abnormal brake noise (when pressing the pedal)	1. Air in the hydraulic booster lines	• With the engine running, check the amount of hydraulic fluid remaining in the reserve tank for the hydraulic booster. • If low, add fluid (Besco ATF III) and bleed to remove air as necessary before starting the engine. Operate the pump and repeatedly step on the pedal to confirm the gear noise (caused by cavitation).
	2. Water in the hydraulic fluid	• Check the color of the hydraulic fluid in the reserve tank for the hydraulic booster (normal: purple, abnormal: milky white). • If the hydraulic fluid is milky white, change the fluid (Besco ATF III) and bleed to remove air as necessary before starting the engine. Operate the pump and strongly press the pedal until reaching full boost range to confirm the gear noise (caused by cavitation). The length of time to keep the pedal pressed all the way down is no more than five seconds.
No pedal boosting effect immediately after turning the engine off	1. Faulty charge valve • Gas leaking from the accumulator • Leakage inside the charge valve	• Keep the engine running for more than 10 seconds. Turn off the engine, and within 60 seconds, step on the pedal once to confirm boosting effect. Boosting effect means the same pedal effort if the engine was running. • If boosting effect does not exist, either the hydraulic booster assembly or the accumulator may need to be replaced.

PROBLEM	POSSIBLE CAUSE	CORRECTION
Warning buzzer continuously sounds	1. Faulty hydraulic booster assembly - Faulty pressure switch - Leakage inside the charge valve	- Confirm that the electric devices (pressure switch, relay, buzzer, etc.) are working correctly. - If all are working correctly, pump the brake pedal at least 10 times after turning the engine off to reduce pressure in the hydraulic booster. Start the engine, and release the parking brake. Check to see if the alarm stops within ten seconds (if it does, the electrical devices are working properly). - When testing the electrical devices, always keep your foot on the brake pedal with just enough pressure to prevent the vehicle from moving. If the alarm does not stop, the hydraulic booster assembly may have to be replaced.
Charge operation remains in effect	1. Bad charge valve operation Bad valve switching operation	- Turn the engine on, and without pressing the brake pedal, check whether any charging sound continues, such as the sound of the fluid. - If it continues and will not stop, replace the hydro boost assembly as necessary.

Notice:

- When the brake pedal is operated after the engine is turned off and the oil pump stops, during a few operations a fluid sound due to the flow of high-pressure oil or a sound of movement by the charge spool may be produced, but this sound is not abnormal; it merely indicates that boosting by the accumulator (accumulator operation) is proceeding normally.

Also, a similar fluid sound is produced during quick operation of the brake pedal even if the engine is on, but this too is normal.

- If the pressure of the oil in the accumulator drops with operation of the brake pedal after the engine is turned off or when the engine has been off for a long time, then immediately after the engine is turned on, fluid sound during charge valve operation or switching sound when charging ends will be produced, but this sound is not abnormal; it merely indicates that the accumulator is being normally charged.

Also, a similar charging operation sometimes occurs and sound is sometimes produced when the pressure inside the accumulator drops even when the engine is on and charging has ended, due to such causes as rapid operation of the brake pedal, internal leakage that is too slight to affect brake performance, or a change in temperature; this too is normal.

- When the brake pedal is pressed strongly as far as the booster full load region while the engine is on, sometimes sound is produced by the flow of hydraulic oil discharged from the oil pump, but this is not abnormal. Also, pressing the pedal in as far as this booster full load region can cause a significant increase in the oil temperature inside the oil pump and can lead to a failure, so keep the pedal pressed for no longer than 5 seconds.

Brake Lining

PROBLEM	POSSIBLE CAUSE	CORRECTION
Poor Contact at the Center of Shoe	1. Bell-mouthed drum. 2. Distorted mounting plate. 3. Bent brake shoe. 4. Undersize linings. 5. Loose wheel bearing.	1-5. Repair or replace as required.
Unequal Wear on the Shoes in the Same Brake	1. Brake linings not a balanced set. 2. Sticking wheel cylinder piston.	1-2. Repair or replace as required.
Material at the Center of the Shoe Excessively Thin	1. Undersize linings. 2. Oversize drum.	1-2. Repair or replace as required.
Lining Tapered across the Width	1. Bell-mouthed drum. 2. Bent shoe. 3. Distorted mounting plate.	1-3. Repair or replace as required.
Lining Worn at One End	Bent mounting plate.	Repair or replace as required.
Linings Glazed	1. Grease on lining. 2. Wrong type lining for service involved.	1-2. Repair or replace as required.
Rivets Tear Loose	1. Improper set rivet. 2. Improper setting of the rivet. 3. Enlarged rivet holes in the shoe.	1-3. Repair or replace as required.
Unequal Wear Opposite Brakes, Same Axle	1. Weak shoe return spring. 2. Obstructed hydraulic line. 3. Stuck wheel cylinder piston. 4. Brake drum surface in poor condition. 5. Loose wheel bearing.	1-5. Repair or replace as required.
Linings at Scored	1. Scored drum. 2. Abrasive material between the lining and drum.	1-2. Repair or replace as required.
Cracks at Rivet Holes	1. Wrong type rivets. 2. Rivets not properly set. 3. Dirt or rust on the shoe table. 4. Wrong size lining.	1-4. Repair or replace as required.
Elongation of the Rivet Holes	1. Loose rivets. 2. Wrong size rivets.	1-2. Repair or replace as required.
Wear on the Edge of the Lining	1. Wrong width lining. 2. Holes improperly drilled. 3. Loose wheel bearing. 4. Bent shoe.	1-4. Repair or replace as required.
Groove on the Edge of the Lining	1. Lining too wide. 2. Worn drum.	1-2. Repair or replace as required.

Brake Drum

PROBLEM	POSSIBLE CAUSE	CORRECTION
Brake Drum Heat Checked in Spots	1. Out-of-round brake drum. 2. Eccentric mounting of the drum. 3. Loose wheel bearing.	1-3. Repair or replace as required.
Drum Uniformly Heat Checked	1. Improper friction materials. 2. Overworked brake. 3. Driver abuse.	1-3. Repair or replace as required.
Excessive Scoring of the Drum	1. Improper friction materials. 2. Overworked brake. 3. Abrasive material between the lining and drum. 4. Soft drum. 5. Bent or warped shoe.	1-5. Repair or replace as required.
Excessive Drum Cracks	1. Drive abuse. 2. Weak drum. 3. Wrong friction material. 4. Overworked brake.	1-4. Repair or replace as required.

Exhaust Brake

PROBLEM	POSSIBLE CAUSE	CORRECTION
Exhaust Brake does not Operate	1. Blown fuse. 2. Improperly adjusted or faulty accelerator or clutch switches. 3. Poor connections or corroded terminals at switches or control valve. 4. Improperly adjusted or seized exhaust brake valve. 5. Vacuum lines kinked, restricted, or plugged with ice. 6. Seized vacuum chamber. 7. Valve linkage broken. 8. Chamber or control valve jammed with ice. 9. Faulty control valve. Valve should open when approximate battery(s) voltage is applied to terminals. 10. Faulty vacuum chamber. 11. Broken wire in wiring harness.	1. Replace. 2. Adjust or replace. 3. Clean or replace. 4. Adjust, or repair. 5. Repair. 6. Repair. 7. Repair. 8. Melt ice and drain lines of water. 9. Replace. 10. Replace. 11. Repair.
Exhaust Brake Slow to Operate	1. Tighten exhaust brake valve or linkage. 2. Improperly adjusted accelerator or clutch switches.	1. Free up and lubricate. 2. Adjust.

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PROBLEM	POSSIBLE CAUSE	CORRECTION
Weak Braking Action	1. Improperly adjusted or tight exhaust brake valve. 2. Tight linkage. 3. Vacuum lines kinked or partially plugged with ice. 4. Leaking fittings at vacuum lines. 5. Leaky vacuum chamber.	1. Free up and/or adjust. Lubricate as needed. 2. Free up and lubricate. 3. Repair. 4. Tighten. 5. Replace.
Exhaust Brake will not Shut Off (Exhaust Brake Control Switch "Off")	1. Seized exhaust brake valve or linkage. 2. Control valve or chamber jammed with ice. 3. Short in wiring harness (approximate battery(s) voltage) at control solenoid regardless of control switch position. 4. Faulty control switch.	1. Free up and lubricate. 2. Melt ice and drain lines. 3. Repair. 4. Replace.
Exhaust Brake "On" Continuously when Exhaust Brake Control Switch is "On" (not Controlled by Clutch or Accelerator Switches)	1. Improperly adjusted clutch or accelerator switches. 2. Switches improperly wired. 3. Short in wiring harness.	1. Adjust. 2. Check wiring against wiring diagram. Repair as needed. 3. Repair.
Engine Overheats or Loses Power	1. Engine brake valve stuck partially closed. 2. Engine brake valve adjusted so that it is partially closed.	1. Free up and lubricate or replace. 2. Adjust.

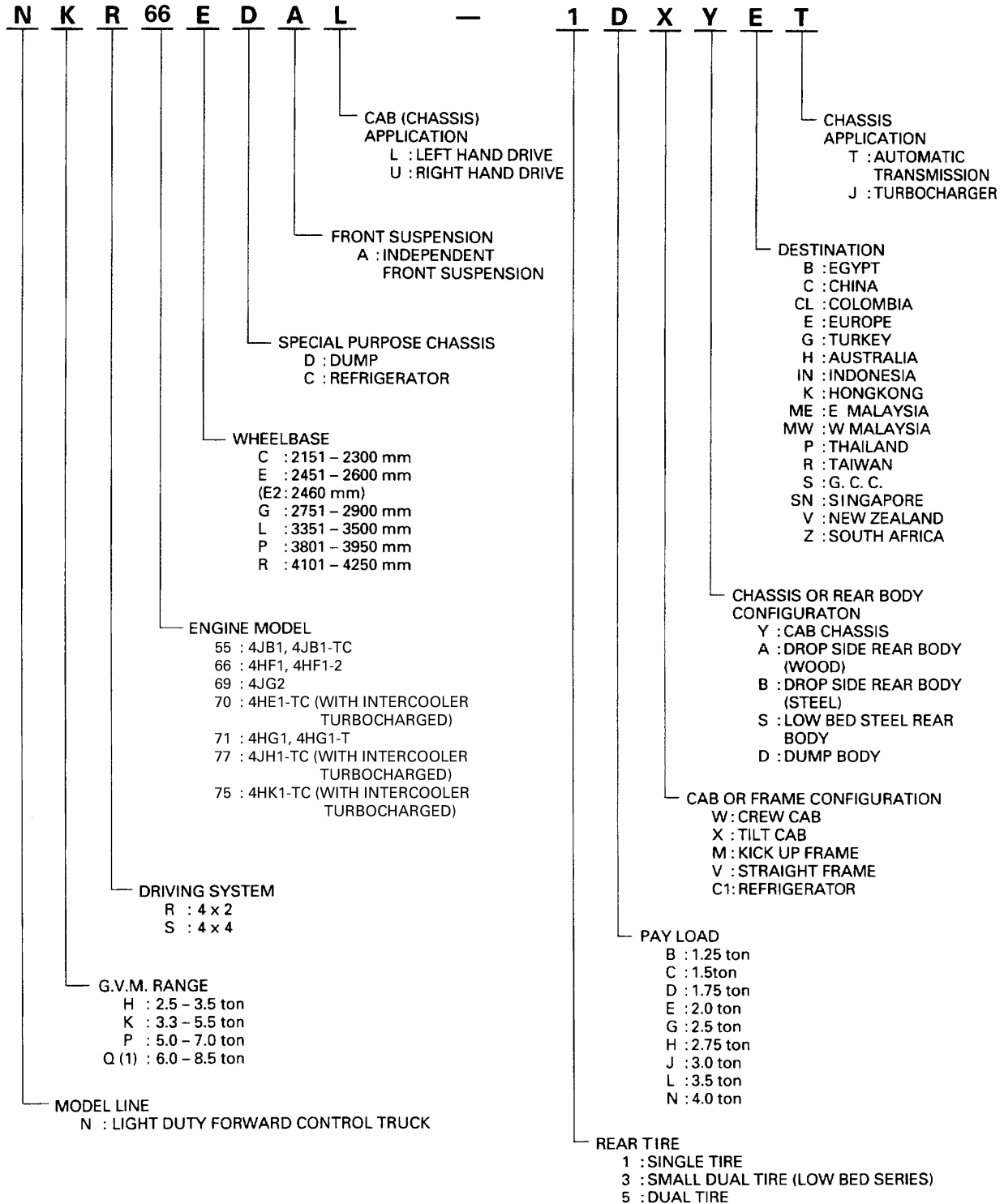
Parking Brakes

Insufficient Braking Force

PROBLEM	POSSIBLE CAUSE	CORRECTION
Brake lining and drum clearance	Clearance between the brake lining and the brake drum excessive	Adjust the brake lining and the brake drum clearance.
Brake lining	Brake lining worn out	Replace the brake lining.
Camshaft	Camshaft worn out	Replace the camshaft.
Control wire	Control wire stretched	Adjust the control wire length or replace the control wire.

MAIN DATA AND SPECIFICATIONS

Model Designation (Explanation Only)



Front Brakes (NHR)

		FRONT BRAKE																						
		DISC BRAKE										DRUM BRAKE												
		WHEEL CYL		DISC				Type		WHEEL CYL.			DRUM.		LINING									
		Inside dia. (in)		Thickness (mm)		Outside dia. (mm)		D 2 L		Inside dia. (in)			Inside dia. (in)		Width (mm)									
		2	2	3	4	4	2			2	3	1	1	1	2	3	3	6	7	1	1			
		2	2	2	3	2	2	3		1	1	1	2	3	3	6	7	1	1					
		+	+	5	4	6	9	1		+	+	7	0	0	0	0	5	0	2					
		1	1	0	2	5	3	0		1	3	9	0	0	0	0	0	0	0					
		/	/							/	/	.												
		8	4							8	16	4							0					
No.	Models	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1	NHR55EU-1CB										○		○			○			○					
2	NHR55EU-1CY										○		○			○			○					
3	NHR55EU-1CYIN										○		○			○			○					
4	NHR55EU-1BWS										○		○			○			○					
5	NHR55EU-3CB										○		○			○			○					
6	NHR55EU-3CZJ										○		○			○			○					
7	NHR55EU-3CBSN										○		○			○			○					
8	NHR55EL-1CBS										○		○			○			○					
9	NHR55EL-1CYS										○		○			○			○					
10	NHR55EL-1CY										○		○			○			○					
11	NHR55EL-1CXY										○		○			○			○					
12	NHR55EL-1CYCLJ										○		○			○			○					
13	NHR55EL-1BWS										○		○			○			○					
14	NHR55EL-3CBS										○		○			○			○					
15	NHR55EL-3CYS										○		○			○			○					
16	NHR55EL-3CB										○		○			○			○					

Rear Brakes (NHR)

		REAR BRAKE										PARKING BRAKE										BRAKE CONTROL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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		WHEEL CYL				DRUM.				LINING				DRUM.				LINING				MASTER CYL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
Type		Inside dia. (in)				Inside dia. (mm)				Width (mm)				Inside dia. (in)				Width (mm)				Inside dia. (in)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
D 2 L	D 2 L	1	+	1	1	2	2	3	3	6	7	9	0	1	1	2	2	3	3	6	3	4	5	6	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1</

Front Brakes (NKR)

		FRONT BRAKE																					
		DISC BRAKE										DRUM BRAKE											
		WHEEL CYL				DISC						Type		WHEEL CYL.				DRUM.		LINING			
		Inside dia. (in)				Thickness (mm)			Outside dia. (mm)			D 2 L		Inside dia. (in)				Inside dia. (in)		Width (mm)			
		2	2	2	2	3	4	4	2	2	2	3	1	1	1	1	2	3	3	6	7	1	1
		+	+	+	+	5	0	2	5	6	9	1	0	+	+	+	7	0	2	0	0	0	2
		1	1	1	1									1	3	3	9	0	0	0	5	0	0
		/	/	/	/									/	/	/	.						0
		8	4	4	4									8	16	8	4						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
No.	Models	—	—	—	—	—	—	—	—	—	○	—	○	—	—	—	○	—	—	○	—	—	—
1	NKR55EU-1EXY	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2	NKR77EAU-1DXYEJ	—	○	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
3	NKR66EU-1EYIN2	—	—	—	—	—	—	—	—	—	○	—	○	—	—	—	○	—	—	○	—	—	—
4	NKR77E2U-5DXYEJ	○	—	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5	NKR77E2U-5HXYKJ	○	—	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	NKR66E2U-5HXY2	—	—	—	—	—	—	—	—	—	○	—	○	—	—	—	○	—	—	○	—	—	—
7	NKR77E2U-5EXYHJ	○	—	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8	NKR77LU-5EXYHJ	○	—	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
9	NKR55LU-5HXY	—	—	—	—	—	—	—	—	—	○	—	○	—	—	—	○	—	—	○	—	—	—
10	NKR66LU-5HXYZ	—	—	—	—	—	—	—	—	—	○	—	○	—	—	—	—	○	—	○	—	—	—
11	NKR77LU-5HXYKJ	○	—	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12	NKR77LU-5DXYEJ	○	—	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
13	NKR66LU-5HXY2	—	—	—	—	—	—	—	—	—	○	—	○	—	—	—	○	—	—	○	—	—	—

Rear Brakes (NKR)

—	REAR BRAKE				PARKING BRAKE				BRAKE CONTROL			
	DRUM BRAKE											
	Type	WHEEL CYL		DRUM.	LINING		DRUM.	LINING		MASTER CYL		
D 2 L	D 2 L (w/o A U T O)	Inside dia. (in)		Inside dia. (mm)		Width (mm)		Inside dia. (in)		Width (mm)		Inside dia. (in)
		1	2	3	4	5	6	7	8	9	10	
1	1	1	2	3	4	5	6	7	8	9	10	11
2	2	1	2	3	4	5	6	7	8	9	10	11
3	3	1	2	3	4	5	6	7	8	9	10	11
4	4	1	2	3	4	5	6	7	8	9	10	11
5	5	1	2	3	4	5	6	7	8	9	10	11
6	6	1	2	3	4	5	6	7	8	9	10	11
7	7	1	2	3	4	5	6	7	8	9	10	11
8	8	1	2	3	4	5	6	7	8	9	10	11
9	9	1	2	3	4	5	6	7	8	9	10	11
10	10	1	2	3	4	5	6	7	8	9	10	11
11	11	1	2	3	4	5	6	7	8	9	10	11
12	12	1	2	3	4	5	6	7	8	9	10	11
13	13	1	2	3	4	5	6	7	8	9	10	11
No.	Models	1	2	3	4	5	6	7	8	9	10	11
1	NKR55EU-1EXY	—	—	—	—	—	—	—	—	—	—	—
2	NKR77EAU-1DXYEJ	—	—	—	—	—	—	—	—	—	—	—
3	NKR66EU-1EYIN2	—	—	—	—	—	—	—	—	—	—	—
4	NKR77E2U-5DXYEJ	—	—	—	—	—	—	—	—	—	—	—
5	NKR77E2U-5HXYKJ	—	—	—	—	—	—	—	—	—	—	—
6	NKR66E2U-5HXY2	—	—	—	—	—	—	—	—	—	—	—
7	NKR77E2U-5EXYHJ	—	—	—	—	—	—	—	—	—	—	—
8	NKR77LU-5EXYHJ	—	—	—	—	—	—	—	—	—	—	—
9	NKR55LU-5HXY	—	—	—	—	—	—	—	—	—	—	—
10	NKR66LU-5HXYZ	—	—	—	—	—	—	—	—	—	—	—
11	NKR77LU-5HXYKJ	—	—	—	—	—	—	—	—	—	—	—
12	NKR77LU-5DXYEJ	—	—	—	—	—	—	—	—	—	—	—
13	NKR66LU-5HXY2	—	—	—	—	—	—	—	—	—	—	—

—	Not available
○	Standard
□	Factory option
	Non

Front Brakes (NKR)

		FRONT BRAKE																							
		DISC BRAKE								DRUM BRAKE															
		WHEEL CYL		DISC				Type		WHEEL CYL.			DRUM.		LINING										
		Inside dia. (in)		Thickness (mm)		Outside dia. (mm)		D		Inside dia. (in)			Inside dia. (in)		Width (mm)										
		2	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	1	1	
		+	+	5	4	0	2	6	9	1	(w/o	(W	L	+	1	+	7	0	2	6	7	0	2	0	2
		1	1	/	0			5	3	0	A	A	L	1	3	3	9	0	0	0	5	0	0	0	0
		/	/	4							U	U	L	/	/	/	.								
		8									T	T	O	8	16	8	4								
— ○ □	No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			
	Models																								
	14	NKR66LU-5HYIN2	—	—	—	—	—	—	—		○	—	—	○	□			—	○		○	□			
	15	NKR71LU-5LYIN	—	—	—	—	—	—	—		○	—	—	—	—	○			—	○	—	—	○		
	16	NKR66LU-5GWY2	—	—	—	—	—	—	—		○	—	—	—	○	—			—	—	○	—	—		
	17	NKR77EU-3EXYHJ	○	—	—	—	○	—	—	○		—	—	—	—	—			—	—	—	—	—		
	18	NKR55EL-1EY	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—		
	19	NKR55EL-1EXY	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—		
	20	NKR55EL-1DXYG	—	—	—	—	—	—	—	—		—	○	—	—	—			—	—	—	—	—		
	21	NKR69EL-1EXYCH	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—		
22	NKR77EAL-1DXYEJ	—	○	—	○	—	—	○	—		—	—	—	—	—			—	—	—	—	—			
23	NKR66EL-1EXY2	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—			
24	NKR77E2L-5DXYEJ	○	—	—	—	○	—	—	○		—	—	—	—	—			—	—	—	—	—			
25	NKR55E2L-5HXY	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—			
26	NKR55E2L-5HXYCLJ	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—			
27	NKR66E2L-5HXY2	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—			
28	NKR66E2L-5HXA2	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—			
29	NKR66E2L-5HXY52	—	—	—	—	—	—	—	—		○	—	—	—	—			—	—	—	—	—			

Rear Brakes (NKR)

REAR BRAKE				PARKING BRAKE				BRAKE CONTROL																								
DRUM BRAKE																																
Type	WHEEL CYL				DRUM.				LINING				DRUM.				LINING				MASTER CYL											
D 2 L (W/O A U T O)	Inside dia. (in)				Inside dia. (mm)				Width (mm)				Inside dia. (in)				Width (mm)				Inside dia. (in)											
	7 / 8	1	3 / 16	5 / 8	1	2	3	4	6	7	0	1	1	2	3	4	5	6	1	1	1	1										
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
14	NKR66LU-5HYIN2				□		—		—	—	○	□	○	□		—	○			—	○				○	—	—	—	—	—	—	—
15	NKR71LU-5LYIN				○		—		—	—	○		—	○		—	○			—	○				—	—	—	—	—	—	—	—
16	NKR66LU-5GWY2				○		—		—	—	○		○	—		—	○			—	○				○	—	—	—	—	—	—	—
17	NKR77EU-3EXYHJ				—	○	—		○	—	—	○	—	—		—	○			—	—	○			—	—	—	—	—	—	—	—
18	NKR55EL-1EY				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
19	NKR55EL-1EXY				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
20	NKR55EL-1DXYG				—	○	—		—	—	—	—	○	—		—	—			—	—	—			—	—	—	—	—	—	—	—
21	NKR69EL-1EXYCH				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
22	NKR77EAL-1DXYEJ				—	○	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
23	NKR66EL-1EXY2				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
24	NKR77E2L-5DXYEJ				—	○	—		—	—	—	—	○	—		—	—			—	—	—			—	—	—	—	—	—	—	—
25	NKR55E2L-5HXY				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
26	NKR55E2L-5HXYCLJ				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
27	NKR66E2L-5HXY2				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
28	NKR66E2L-5HXA2				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—
29	NKR66E2L-5HXY2				○	—	—		—	—	—	—	○	—		—	—			—	—	—			○	—	—	—	—	—	—	—

—	Not available
○	Standard
□	Factory option
	Non

—	Not available
○	Standard
□	Factory option
	Non

[illegible]

—	Not available
○	Standard
□	Factory option
	Non

Rear Brakes (NKR)

REAR BRAKE				PARKING BRAKE				BRAKE CONTROL																								
DRUM BRAKE																																
Type	WHEEL CYL.			DRUM.			LINING			DRUM.	LINING			MASTER CYL.																		
D 2 L (W/O AUT O)	Inside dia. (in)			Inside dia. (mm)			Width (mm)			Inside dia. (in)			Width (mm)			Inside dia. (in)																
	7 / 8	1		1	2	3	6	7	1	1	2	3	4	5	6	1	1	1														
		+	+	1	2	2	2	4	2	1	7	9	0	5	3	+	+	+														
		16	16	8																												
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
Models																																
44	NK R77EL-3EXYRJ																															
45	NK R77EL-3EXARJ																															
46	NK R77LL-5EXYRJ																															
47	NK R77LL-5HXYRJ																															

—	Not available
○	Standard
□	Factory option
	Non

—	Not available
○	Standard
□	Factory option
	Non

No.	Models
44	NKR77EL-3EXYRJ
45	NKR77EL-3EXARJ
46	NKR77LL-5EXYRJ
47	NKR77LL-5HXYRJ

—	Not available
○	Standard
□	Factory option
	Non

Rear Brakes (NPR / NQR / NPS)

REAR BRAKE				PARKING BRAKE		BRAKE CONTROL									
DRUM BRAKE															
Type	WHEEL CYL.		DRUM.		LINING		DRUM.		LINING		MASTER CYL.				
D 2 L (wo A U T O)	Inside dia. (in)		Inside dia. (in)		Width (mm)		Inside dia. (in)		Width (mm)		Inside dia. (in)				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26
12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27
13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	

—	Not available
○	Standard
□	Factory option
	Non

No.	Models
1	NPR66GU-5JXY2
2	NPR66GU-5JXY
3	NPR77GU-5DXYEJ
4	NPR75GU-5EXYHJ2
5	NPR66GDU-5LX
6	NPR66GU-5LXY
7	NPR70GU-5JXYKJ
8	NPR70GU-5LXYKJ
9	NPR77LU-5DXYEJ
10	NPR77LU-5HXYEJ
11	NPR75LU-5EXYHJ2
12	NPR66LU-5JXA2
13	NPR66LU-5JXY2
14	NPR66LU-5JXYZ
15	NPR66LU-5LXA
16	NPR66LU-5LXY
17	NPR66LU-5LVXYZ
18	NPR75LU-5JXYHJ2
19	NPR71LU-5JXYSNJ
20	NPR75LU-5JXYEJ2

Front Brakes (NPR / NQR / NPS)

FRONT BRAKE																									
DISC BRAKE												DRUM BRAKE													
WHEEL CYL.			DISC						Type			WHEEL CYL.			DRUM.			LINING							
Inside dia. (in)			Thickness (mm)			Outside dia. (mm)			2 L (W/O A U T T O)			2 L (W A U T T O)			Inside dia. (in)			Width (mm)							
2 + 1 / 8	2 + 1 / 4	2 + 2	3 5	4 0	4 2	2 6 5	2 9 3	3 1 0	3 6 3							1 + 1 / 8	1 + 3 / 16	1 + 3 / 8	2 7 9	3 0 0	6 0 0	1 7 5	1 0 0		
No.	Models		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
21	NPR70LU-5JXYKJ		○	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
22	NPR70LU-5LXYKJ		—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
23	NPR75LU-5LXYHJ2		—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
24	NQR75LU-5LXYEJ		—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
25	NQR75LU-5LXYEJ2		—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
26	NQR75LU-5NXYHJ		—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
27	NPR75LU-5KWYHJ2		—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
28	NPR75LU-5HWYEJ2		○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
29	NPR70LU-5HWYKJ		○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
30	NPR66PU-5JXA2		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
31	NPR66PU-5JXY2		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
32	NPR66PU-5LXA		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
33	NPR66PU-5LXY		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
34	NPR66PU-5LVXY		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
35	NPR66PBU-5LVY		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
36	NPR66PU-5LVXYZ		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
37	NQR66PU-5NVXY		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
38	NQR71PU-5NVXY		—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
39	NPR75PU-5JXYEJ2		○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
40	NPR70PU-5JXYKJ		○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	Not available
○	Standard
□	Factory option
	Non

Rear Brakes (NPR / NQR / NPS)

REAR BRAKE				PARKING BRAKE		BRAKE CONTROL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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21	NPR70LU-5JXYKJ																																	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Front Brakes (NPR / NQR / NPS)

FRONT BRAKE																								
DISC BRAKE												DRUM BRAKE												
WHEEL CYL.		DISC						Type				WHEEL CYL.			DRUM.		LINING							
Inside dia. (in)		Thickness (mm)		Outside dia. (mm)				2 L (W/O A U T O)		2 L (W A U T O)		D 2 L		Inside dia. (in)			Width (mm)							
2 + 1 / 8	2 + 2 / 4	3 5	4 0 2	2 6 5	2 9 3	3 1 0 3							1 + 1 / 8	1 + 3 / 16	1 + 3 / 8	2 7 9	3 0 0	6 0 0	1 7 5	1 0 0	2 2 0			
No.	Models	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
41	NPR70PU-5LXYKJ	—		○	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
42	NPR75PU-5LXYHJ2	—		○	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
43	NQR75PU-5LXYEJ	—		○		—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
44	NQR75PU-5LXYEJ2	—		○	—	—	○	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—
45	NQR70PU-5NXYKJ	—		—	—	—	—		—	—	—	○	—	—	—	—	○		—	○	—	—	—	○
46	NQR66RU-5NVXY	—		—	—	—	—	—	—	—	—	○	—	—	—	○	—		○	—	—	—	—	○
47	NQR71RU-5NVXY	—		—	—	—	—	—	—	—	—	○	—	—	—	○	—		○	—	—	—	—	○
48	NQR75RU-5NXYZJ	—		—	—	—	—		—	—	—	○	—	—	—	—	○			○	—	—	—	○
49	NQR75RBU-5NXYZJ	—		—	—	—	—	—	—	—	—	○	—	—	—	—	○			○	—	—	—	○
50	NQR75RU-5NXYHJ	—		○	—	—	○		—	—	○	—	—	—	—	—	—			—	—	—	—	—
51	NQR70RU-5NXYKJ	—		—	—	—	—		—	—	—	○	—	—	—	—	○			○	—	—	—	○
52	NQR75TU-5JXYEJ	—		○	—	—	○	—	—	○	—	—	—	—	—	—	—			—	—	—	—	—
53	NQR75TU-5LXYEJ2	—		○	—	—	○		—	○	—	—	—	—	—	—	—			—	—	—	—	—
54	NQR75TU-5KWYEJ	—		○	—	—	○	—	—	○	—	—	—	—	—	—	—			—	—	—	—	—
55	NQR75TU-5KWYEJ2	—		○	—	—	○		—	○	—	—	—	—	—	—	—			—	—	—	—	—
56	NPR71LU-4EXYSNJ	○		—		○	—		○	—	—	—	—	—	—	—	—			—	—	—	—	—
57	NPS75LU-5JXYHJ2	—		—	—	—	—	—	—	—	—	—	—	○	—	○	—			○		○	—	—
58	NPS71LU-5JXYIN	—		—	—	—	—	—	—	—	—	—	—	○	—	○	—			○		○	—	—
59	NPR77GL-5DXYEJ	○		—	—	○	—		○	—	—	—	—	—	—	—	—			—	—	—	—	—
60	NPR66GL-5JXY2	—		—	—	—	—	—	—	—	—	○	—	—	○	—	—			○		○	—	—

—	Not available
○	Standard
□	Factory option
	Non

—	Not available
○	Standard
□	Factory option
	Non

Rear Brakes (NPR / NQR / NPS)

REAR BRAKE				PARKING BRAKE		BRAKE CONTROL																												
DRUM BRAKE																																		
Type	WHEEL CYL.				DRUM.				LINING				DRUM.	LINING	MASTER CYL.																			
D 2 L (w/o A U T O)	Inside dia. (in)				Inside dia. (in)				Width (mm)				Inside dia. (in)	Width (mm)	Inside dia. (in)								D S P V	L S P V	E X H A U S T B R A K E	H B B	A B S							
	7 / 8	1 / 16	3 / 16	5 / 16	1 / 16	3 / 16	7 / 16	9 / 16	2 / 8	6 / 16	7 / 16	9 / 16	1 / 16	2 / 8	1 / 16	3 / 16	5 / 16	7 / 16	9 / 16	1 / 16	2 / 8	3 / 16						5 / 16	7 / 16	9 / 16	1 / 16	2 / 8	3 / 16	5 / 16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
Models																																		
41	NPR70PU-5LXYKJ																																	
42	NPR75PU-5LXYHJ2																																	
43	NQR75PU-5LXYEJ																																	
44	NQR75PU-5LXYEJ2																																	
45	NQR70PU-5NXYKJ																																	
46	NQR66RU-5NXY																																	
47	NQR71RU-5NXY																																	
48	NQR75RU-5NXYZJ																																	
49	NQR75RBU-5NXYZJ																																	
50	NQR75RU-5NXYHJ																																	
51	NQR70RU-5NXYKJ																																	
52	NQR75TU-5JXYEJ																																	
53	NQR75TU-5LXYEJ2																																	
54	NQR75TU-5KWYEJ																																	
55	NQR75TU-5KWYEJ2																																	
56	NPR71LU-4EXYSNJ																																	
57	NPS75LU-5JXYHJ2																																	
58	NPS71LU-5JXYIN																																	
59	NPR77GL-5DXYEJ																																	
60	NPR66GL-5JXY2																																	

—	Not available
○	Standard
□	Factory option
	Non

—	Not available
○	Standard
□	Factory option
	Non

—	Not available
○	Standard
□	Factory option
	Non

Rear Brakes (NPR / NQR / NPS)

		REAR BRAKE										PARKING BRAKE		BRAKE CONTROL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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Type		WHEEL CYL.				DRUM.				LINING				DRUM.		LINING		MASTER CYL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
D 2 L (w/o A U T O)	D 2 L (W A U T O)	Inside dia. (in)				Inside dia. (in)				Width (mm)				Inside dia. (in)		Width (mm)		Inside dia. (in)				D S P V				L S P V				E X H A U S T B R A K E				H B B A B S																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																														
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—	Not available
○	Standard
□	Factory option
	Non

No.	Models	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
81	NPR75LL-5JXYEJ2	○		—		○	—		○	—		—	—	—	—	—	—			—		—	—	—
82	NPR70LL-5LXYRJ2	—		—		—	—		—	—		○	—	—	—	○	—			○		—	○	—
83	NPR71LL-5LVXYCLJ	—		—		—	—		—	—		○	—	—	—	○	—			○		—	○	—
84	NQR75LL-5LXYEJ	—		○		—	○		—	○	—	—	—	—	—	—	—			—		—	—	—
85	NQR75LL-5LXYEJ2	—		○		—	○		—	○	—	—	—	—	—	—	—			—		—	—	—
86	NPR77LL-5CWYEJ	○		—		○	—		○	—		—	—	—	—	—	—			—		—	—	—
87	NPR66LL-5HWY	—		—		—	—		—	—		○	—	—	○	—	—			○		○	—	—
88	NPR75LL-5HWYEJ2	○		—		○	—		○	—		—	—	—	—	—	—			—		—	—	—
89	NPR66PL-5JXA2	—		—		—	—		—	—		○	—	—	○	—	—			○		○	—	—
90	NPR66PL-5JXY2	—		—		—	—		—	—		○	—	—	○	—	—			○		○	—	—
91	NPR66PL-5JXAS	—		—		—	—		—	—		○	—	—	○	—	—			○		○	—	—
92	NPR66PL-5JXYS	—		—		—	—		—	—		○	—	—	○	—	—			○		○	—	—
93	NPR66PL-5JXY	—		—		—	—		—	—		○	—	—	○	—	—			○		○	—	—
94	NPR70PL-5JXYRJ2	—		—		—	—		—	—		○	—	—	○	—	—			○		○	—	—
95	NPR66PL-5LXA	—		—		—	—		—	—		○	—	—	—	○	—			○		—	○	—
96	NPR66PL-5LXY	—		—		—	—		—	—		○	—	—	—	○	—			○		—	○	—
97	NPR66PL-5LXAS	—		—		—	—		—	—		○	—	—	—	○	—			○		—	○	—
98	NPR66PL-5LXYS	—		—		—	—		—	—		○	—	—	—	○	—			○		—	○	—
99	NPR66PBL-5LVY	—		—		—	—		—	—		○	—	—	—	○	—			○		—	○	—
100	NPR66PL-5LVXY	—		—		—	—		—	—		○	—	—	—	○	—			○		—	○	—

Rear Brakes (NPR / NQR / NPS)

REAR BRAKE				PARKING BRAKE		BRAKE CONTROL																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
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Type	WHEEL CYL.				DRUM.				LINING				DRUM.	LINING	MASTER CYL.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
D 2 L (w/o A U T O)	Inside dia. (in)				Inside dia. (in)				Width (mm)				Inside dia. (in)	Width (mm)	Inside dia. (in)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
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—	Not available
○	Standard
□	Factory option
	Non

Front Brakes (NPR / NQR / NPS)

		FRONT BRAKE																						
		DISC BRAKE										DRUM BRAKE												
		WHEEL CYL.		DISC						Type		WHEEL CYL.			DRUM.		LINING							
		Inside dia. (in)		Thickness (mm)		Outside dia. (mm)				2 L (^W _O A U T T O)		D 2 L		Inside dia. (in)			Inside dia. (in)		Width (mm)					
		2 + 1 / 8	2 + 2 / 4	3 5	4 0 2	2 6 5	2 9 3	3 1 0	3 6 3															
No.	Models	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
101	NPR66PL-5LVXYS	—		—	—	—	—		—	—	—	○	□	—	—	○	—			○	—	—	○	□
102	NQR66PL-5NVXA	—		—	—	—	—		—	—	—	○	—	—	—	○	□			○	—	—	—	○
103	NQR71PL-5NVXY	—		—	—	—	—		—	—	—	○	—	—	—	○	□			○	—	—	—	○
104	NQR71PL-5NVXYJ	—		—	—	—	—		—	—	—	—	○	—	—	○	—			○	—	—	—	○
105	NQR71PL-5NVXYS	—		—	—	—	—		—	—	—	○	—	—	—	○	—			○	—	—	—	○
106	NPR75PL-5JXEJ2	○		—	○	—	—		○	—	—	—	—	—	—	—	—			—	—	—	—	—
107	NPR70PL-5LXYRJ2	—		—	—	—	—		—	—	—	○	—	—	—	○	—			○	—	—	○	—
108	NPR71PL-5LVXYCLJ	—		—	—	—	—		—	—	—	○	—	—	—	○	—			○	—	—	○	—
109	NPR70PL-5LXYCHJ	—		—	—	—	—		—	—	—	○	—	—	—	○	—			○	—	—	○	—
110	NQR75PL-5LXEJ	—	○	—	—	—	○		—	○	—	—	—	—	—	—	—			—	—	—	—	—
111	NQR75PL-5LXEJ2	—	○	—	—	—	○		—	—	—	—	—	—	—	—	—			—	—	—	—	—
112	NQR70PL-5NXYRJ	—		—	—	—	—		—	—	—	○	—	—	—	—	○			○	—	—	—	○
113	NQR70PBL-5LYRJ	—		—	—	—	—		—	—	—	○	—	—	—	—	○			○	—	—	—	○
114	NQR75PL-5LXYGJ	—		—	—	—	—		—	—	—	—	○	—	—	○	—			○	—	—	—	○
115	NQR71RL-5NVXY	—		—	—	—	—		—	—	—	○	—	—	—	○	□			○	—	—	—	○
116	NQR71RL-5NVXYS	—		—	—	—	—		—	—	—	○	—	—	—	○	—			○	—	—	—	○
117	NQR71RBL-5NVY	—		—	—	—	—		—	—	—	○	—	—	—	○	—			○	—	—	—	○
118	NQR71RBL-5LVYB	—		—	—	—	—		—	—	—	○	—	—	—	○	—			○	—	—	—	○
119	NQR71RL-5NVXYB	—		—	—	—	—		—	—	—	○	—	—	—	○	□			○	—	—	—	○
120	NQR70RL-5LYXJ2	—		—	—	—	—		—	—	—	○	—	—	—	○	—			○	—	—	—	○

—	Not available
○	Standard
□	Factory option
	Non

Rear Brakes (NPR / NQR / NPS)

REAR BRAKE				PARKING BRAKE		BRAKE CONTROL																												
DRUM BRAKE																																		
Type	WHEEL CYL.		DRUM.		LINING		DRUM.		LINING		MASTER CYL.																							
D 2 L (w/o A U T O)	Inside dia. (in)		Inside dia. (in)		Width (mm)		Inside dia. (in)		Width (mm)		Inside dia. (in)		D S P V	L S P V	E X H A U S T B R A K E	H B B	A B S																	
	7 / 8	1 / 16	2 / 16	3 / 16	4 / 16	5 / 16	6 / 16	7 / 16	8 / 16	9 / 16	10 / 16	11 / 16																						
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	
101	○	□	—	○	□	—	—	—	—	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
102	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
103	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
104	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
105	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
106	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
107	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
108	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
109	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
110	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
111	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
112	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
113	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
114	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
115	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
116	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
117	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
118	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
119	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
120	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

—	Not available
○	Standard
□	Factory option
	Non

Front Brakes (NPR / NQR / NPS)

		FRONT BRAKE																						
		DISC BRAKE					DRUM BRAKE																	
		WHEEL CYL.		DISC				Type		WHEEL CYL.		DRUM.		LINING										
		Inside dia. (in)		Thickness (mm)		Outside dia. (mm)				2 L (W/O A U T O)		2 L (W A U T O)		D 2 L		Inside dia. (in)		Width (mm)						
		2 + 1 / 8	2 + 2 / 4	3 4 0 5	4 4 2	2 6 5 3	2 9 3 1 6 3							1 + 1 / 8	1 + 3 / 16	1 + 3 / 8	2 7 9 0 0	3 0 0 0 0	1 0 0 0 0					

—	Not available
○	Standard
□	Factory option
	Non

Rear Brakes (NPR / NQR / NPS)

Not available		REAR BRAKE										PARKING BRAKE		BRAKE CONTROL																							
Standard		DRUM BRAKE																																			
Factory option		Type		WHEEL CYL.				DRUM.				LINING				DRUM.		LINING		MASTER CYL.																	
Non		D 2 L (w/o A U T O)	D 2 L (w/o A U T O)	Inside dia. (in)				Inside dia. (in)				Width (mm)				Inside dia. (in)		Width (mm)		Inside dia. (in)																	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
	No.	Models	1	2	3	4	5	6	7	8																											
	121	NQR70RL-5LYXJT	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	122	NQR70RL-5NXYRJ	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	123	NQR75TL-5LXYEJ	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	124	NQR75TL-5LXYEJ2	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	125	NQR75TL-5KWYEJ	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	126	NQR75TL-5KWYEJ2	—	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	127	NPS71LL-5JXY	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	128	NPR71LU-5LXYPJ	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	129	NQR70LU-5NXYPJ	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	130	NQR75LU-5NXYPJ	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	131	NPR71PU-5LXYPJ	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
	132	NQR70RU-5NXYPJ	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	
133	NQR75RU-5NXYPJ	○	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—		

—	Not available
○	Standard
□	Factory option
	Non

SERVICE STANDARD

ITEMS		SERVICE STANDARD	SERVICE LIMIT
FRONT DISC BRAKE ASSEMBLY			
Pad Thickness (φ 265 mm)	mm (in)	14.0 (0.551)	1.0 (0.039)
Pad Thickness (φ 293 & φ 310 mm)	mm (in)	13.0 (0.510)	1.0 (0.039)
Piston and Cylinder Clearance	mm (in)	0.08 — 0.18 (0.0031 — 0.0071)	0.23 (0.0091)
Disc Lateral Run out	mm (in)	0.13 (0.005) or less	—
Disc Maximum Parallelism	mm (in)	0.02 (0.0008)	—
Disc Thickness (φ 265 mm)	mm (in)	35.0 (1.378)	28.5 (1.122)
Disc Thickness (φ 293 mm)	mm (in)	40.0 (1.575)	37.0 (1.457)
Disc Thickness (φ 310 mm)	mm (in)	42.0 (1.654)	39.0 (1.535)
FRONT DRUM BRAKE ASSEMBLY			
Brake Drum Inside Diameter	mm (in)	279.4 (11.00) 300.0 (11.81) 320.0 (12.60)	281.0 (11.06) 301.5 (11.87) 321.5 (12.66)
Brake Drum Run-out	mm (in)	0.13 (0.005) or less	—
Brake Lining Thickness or Rivet Depth	mm (in)	—	1.0 (0.039)
Wheel Cylinder and Piston Clearance	mm (in)	—	0.15 (0.006)
REAR DRUM BRAKE ASSEMBLY			
Brake Drum Inside Diameter	mm (in)	228.6 (9.00) 240.0 (9.45) 260.0 (10.24) 279.4 (11.0) 290.0 (11.42) 300.0 (11.81) 320.0 (12.60) 370.0 (14.57)	230.0 (9.06) 241.5 (9.51) 261.5 (10.30) 281.0 (11.06) 291.5 (11.48) 301.5 (11.87) 321.5 (12.66) 372.0 (14.64)
Brake Drum Run-out	mm (in)	0.13 (0.005) or less	—
Brake Lining Thickness or Rivet Depth	mm (in)	—	1.0 (0.039)
Wheel Cylinder and Piston Clearance	mm (in)	—	0.15 (0.006)
BRAKE PEDAL AND CONTROL			
Master Cylinder and Piston Clearance	mm (in)	0.11 — 0.195 (0.004 — 0.008)	0.22 (0.009)
PARKING BRAKE			
Brake Drum Inside Diameter	mm (in)	178.0 (7.01) 190.0 (7.48) 203.2 (8.00)	179.0 (7.05) 191.0 (7.52) 205.0 (8.07)
Brake Drum Run-out	mm (in)	0.05 (0.002) or less	—
Brake Lining Thickness	mm (in)	—	1.0 (0.039)
EXHAUST BRAKE			
Butterfly Valve and Body Clearance			
(4HF1 Engine)	mm (in)	0.4 — 0.6 (0.016 — 0.024)	—
(Other Engine)	mm (in)	0.1 — 0.2 (0.004 — 0.008)	—

SERVICING

Service Brakes

Wheel Brake Adjustment

Brake Lining Clearance Adjustment (2L and D2L)

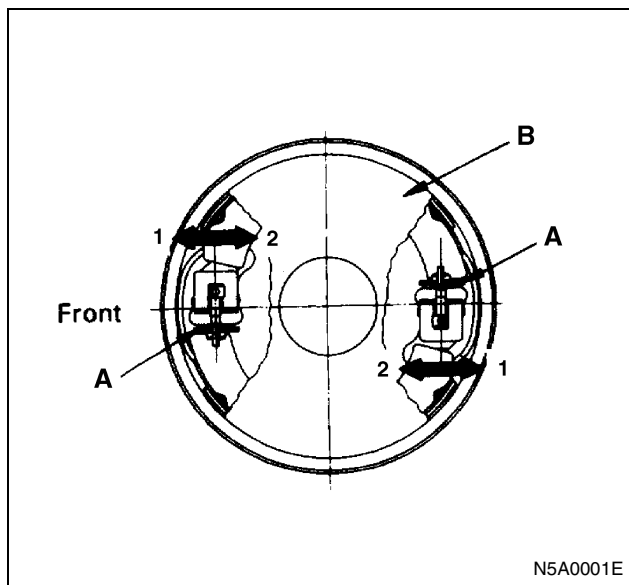
Without auto-adjuster type

1. Chock the wheels not being adjusted.
2. Jack up the axle until the wheels can be turned freely.
3. Manually shake the wheel to check for excessive play.
4. Remove the grommet fitted to one of the brake drum cover adjuster holes.
5. Insert a screwdriver into the adjuster hole. Manually rotate the wheel while turning the adjuster (A) in the direction of the arrow (1) until resistance is felt at the wheel.
6. Back off the adjuster (A) in the direction of the arrow (2) the specified number of notches.

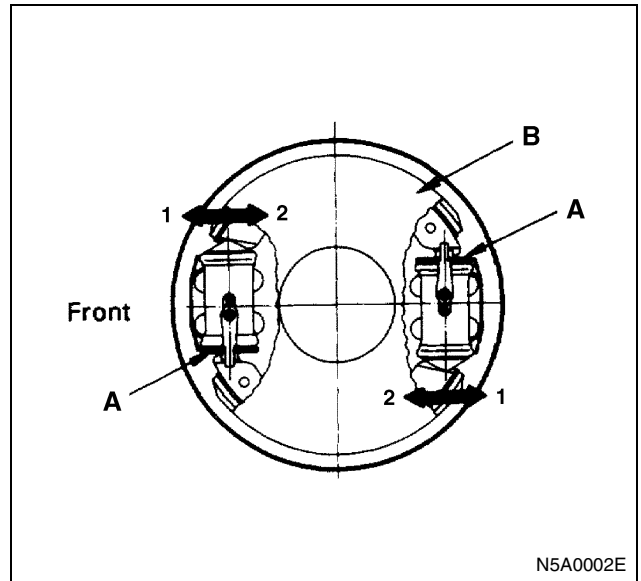
Specified Notches

Front	5-6
Rear	

2L



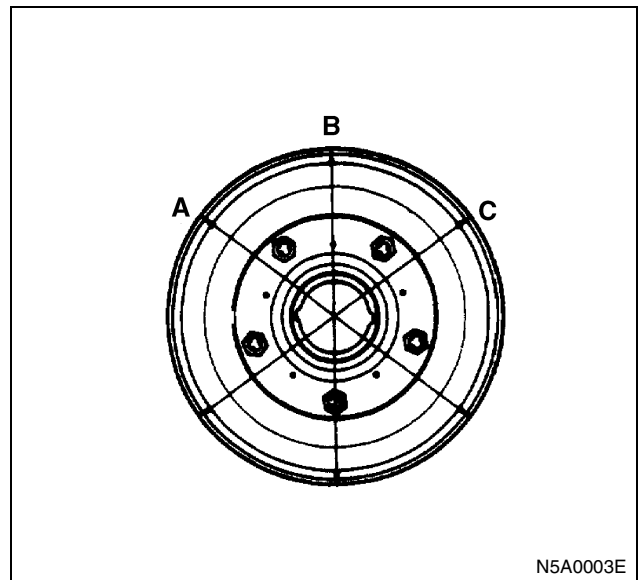
D2L



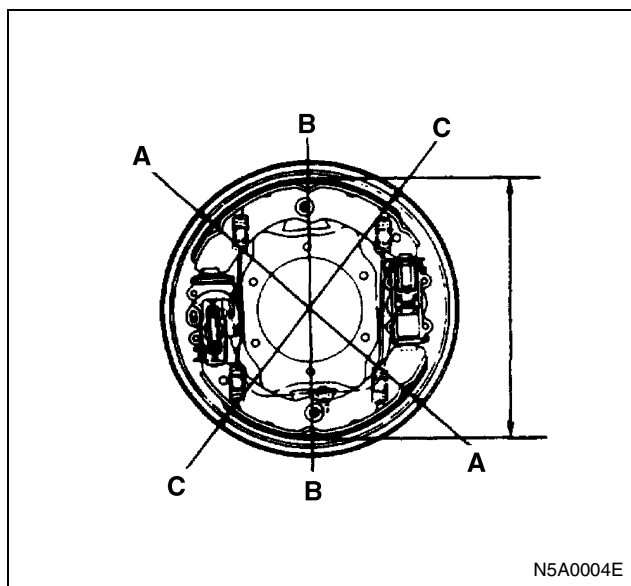
7. Install the grommet to the adjuster hole.
8. Repeat Steps 4 through 7 on the other wheels.
9. Lower the vehicle to the ground.

With auto-adjuster type

1. Measure the internal diameter of the brake drum.
 - Take measurement of the distance at (A), (B) and (C) points.



2. Measure the external diameter of the brake shoe.
 - Take measurement of the distance at (A), (B) and (C) points.

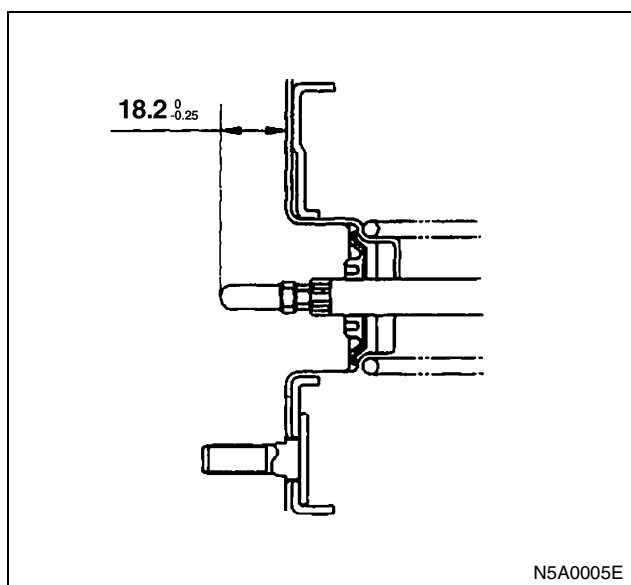


- Turn the adjuster gear so that the difference between the internal diameter of the brake drum and the external diameter of the brake shoe becomes 0.6 mm (0.024 in).
- Step on the brake hard while turning the brake drum in the forward direction, or while driving forward.

Brake Pedal Adjustment

Brake Pedal Height and Free Play Adjustment Vacuum Booster (Master Vac) Type:

The height of push rod should be adjusted so that the distance from its master cylinder mounting surface to end measures 18.2 mm (0.717 in).

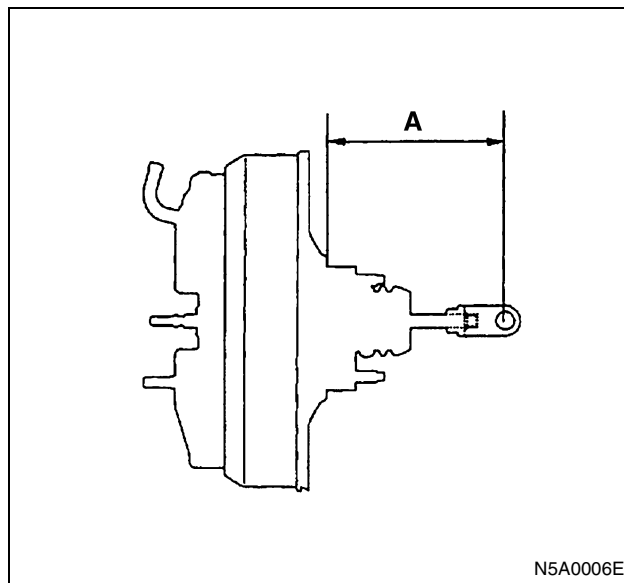


For push rod length adjustment, the distance from the center of crevis pin hole to brake pedal bracket mounting surface should be set at 109 mm (4.291 in); without spacer, 129 mm (5.079 in); with spacer.

When fixed under this condition, there is no need to adjust the height of brake pedal from floor and free play.

Notice:

- As vacuum booster (Master Vac) is undetachable type, it should be replaced as an assembly if it does not work well.
- Be sure to adjust the stop light switch.



Brake Pedal Free Play and Allowance

Standard value

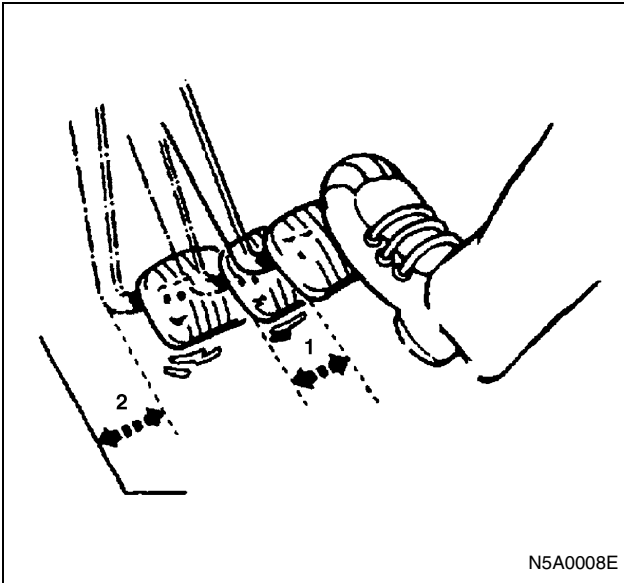
- Free play: 4 to 7 mm (0.16 to 0.28 in)
24 to 29 mm (0.94 to 1.14 in) for HBB type

2. Allowance			mm (in)
NHR	Front Drum Brake		50 (1.97)
NKR	Front Disc Brake Model		40 (1.57)
	Front Drum Brake Model	Less than GVM 6.5 ton	60 (2.36)
		GVM 6.5 ton	40 (1.57)
NPR NQR	Front Disc Brake Model		40 (1.57)
	Front Drum Brake Model	Less than GVM 6.5 ton	60 (2.36)
		GVM 6.5 ton or more	40 (1.57)
NPS	Front Drum Brake		40 (1.57)

(When depressed with force of the 490 N (50 kg / 110 lbs).)

NPR, NQR (HBB type)	Front Disc Brake Model	35 (1.38)
	Front Drum Brake Model	45 (1.77)

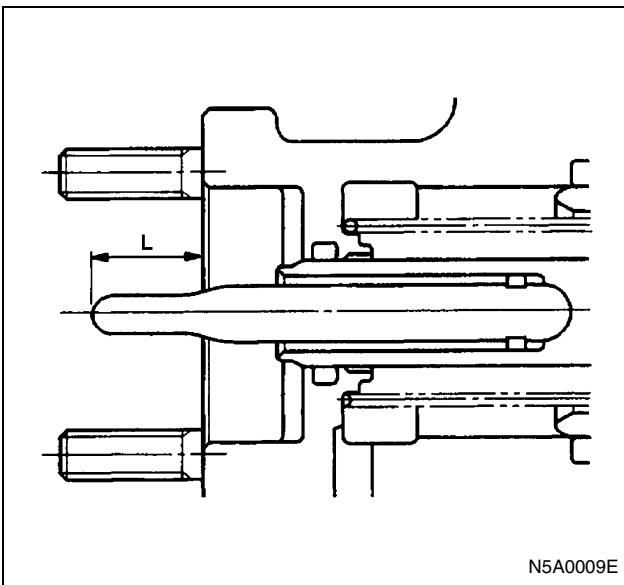
(When depressed with force of the 294 N (30 kg / 66 lbs).)



Hydraulic Booster Type

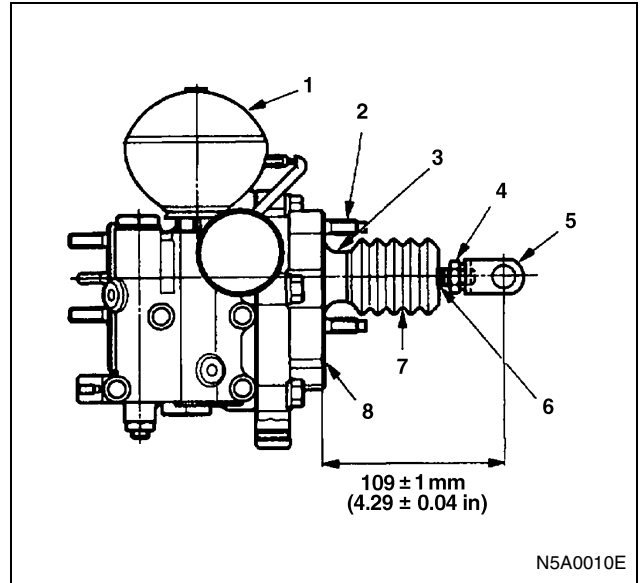
Push Rod Length

- Use a scale to measure the push rod length (push rod to flange face clearance). Push Rod Length "L" to 17.95 — 18.2 mm (0.707 — 0.717 in). If the push rod length is not equal to the specification, the hydraulic booster assembly must be replaced.



Operating Rod Length

- Loosen the jam nut at the stop light switch.
- Loosen the jam nut on the hydraulic booster operating rod.
- Turn the operating rod until the distance from the center of clevis pin hole to mounting surface of the brake pedal bracket should be set at 109 ± 1 mm (4.29 ± 0.04 in). When fixed under this condition, there is no need to adjust the brake pedal height and free play.



Legend

- Accumulator
- Stud bolt
- Cover boss
- Lock nut
- Clevis
- Operating rod
- Guard
- Flange

- Tighten the operating rod jam nut.

Tighten:

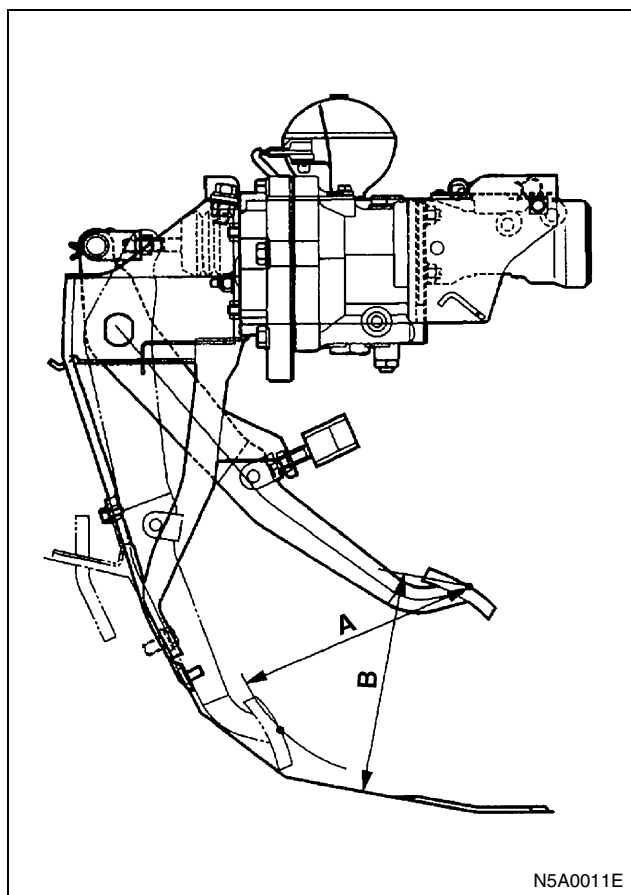
Jam nut to 20 N·m (2.0 kg·m / 14 lb·ft)

- Stop light switch so that the end of the switch threaded portion contacts the brake pedal, then back off the switch 1/2 turn.

Tighten:

Stop light switch locknut to 20 N·m (2.0 kg·m / 14 lb·ft)

- Check light pedal operation to be sure that it is operating properly.
 - Measure the brake pedal free play, after reducing the pressure of the hydraulic oil in the accumulator by pedal operations at least 10 times with engine off. Brake pedal normal play is between 21 — 24 mm (0.83 — 0.94 in).
 - Pressing the brake pedal with a force of 294 N (30 kg / 66 lb) with the engine on, the clearance between the brake pedal and floor panel is more than 35 mm (1.4 in).
 - Brake pedal height "B" is 167 mm (6.58 in) (reference).
 - Brake pedal travel "A" is between 180 ± 5 mm (7.09 ± 0.2 in) (reference).



Legend

- A. Pedal travel
(Reference)..... 180 ± 5 mm (7.09 ± 0.2 in)
- B. Pedal height
(Reference).....167 mm (6.58 in)

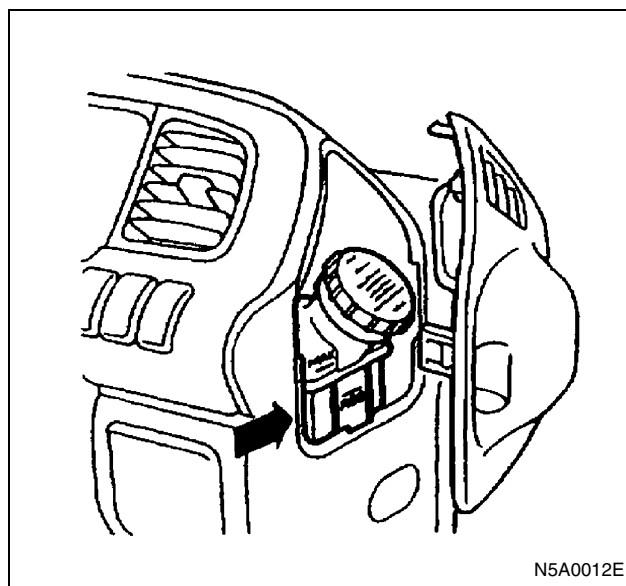
Brake Bleeding

Brake Bleeding Precautions

Air in the brake hydraulic circuit will result in dangerous reduced braking efficiency.

The brake hydraulic circuit must be bled whenever the vehicle has been operated with the reservoir brake fluid level at an excessively low level or any time the brake pipes have been disconnected in the course of brake servicing.

The brake bleeding procedure requires the cooperative action of two men.



Brake Bleeding Procedure

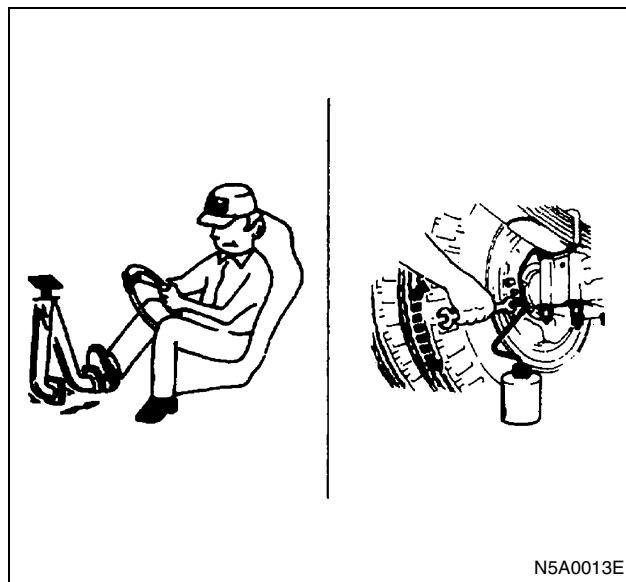
Bleed the brake hydraulic circuit in the following sequence.

LHD

Left-hand rear wheel (vehicle equipped with ABS) → Right-hand rear wheel → DSPV or LSPV → (If so equipped) → Right-hand front wheel → Left-hand front wheel

RHD

Left-hand rear wheel (vehicle equipped with ABS) → Right-hand rear wheel → DSPV or LSPV (If so equipped) → Left-hand front wheel → Right-hand front wheel



1. Check to make sure that the service area is well ventilated.

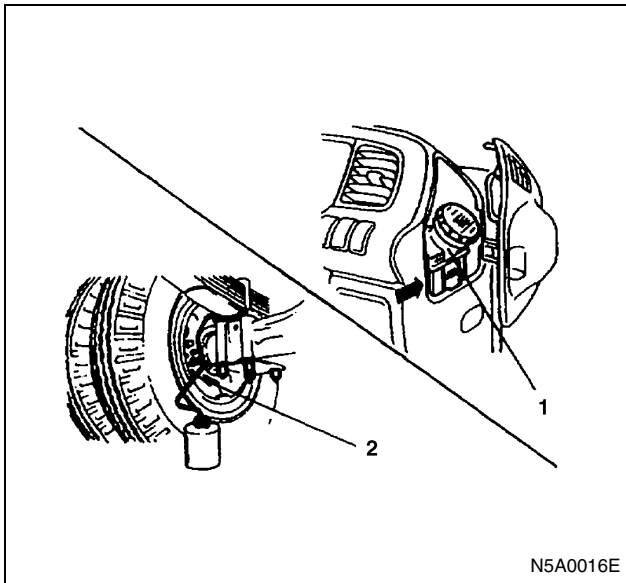
Apply the parking brake firmly. Start the engine and allow it to run until the vacuum pressure rises sufficiently.

Notice:

Brake booster (master-vac) will be adversely effected if bleeding operation is performed without running engine.

If the vehicle is equipped with ABS, be sure to remove the ABS fuse (60 A) from the fuse box before beginning the air bleeding procedure. If this is not done, air is not bled completely from ABS unit, so that ABS unit will be broken. (Be sure to install the ABS fuse (60 A) in specified position when the air bleeding procedure is completed.)

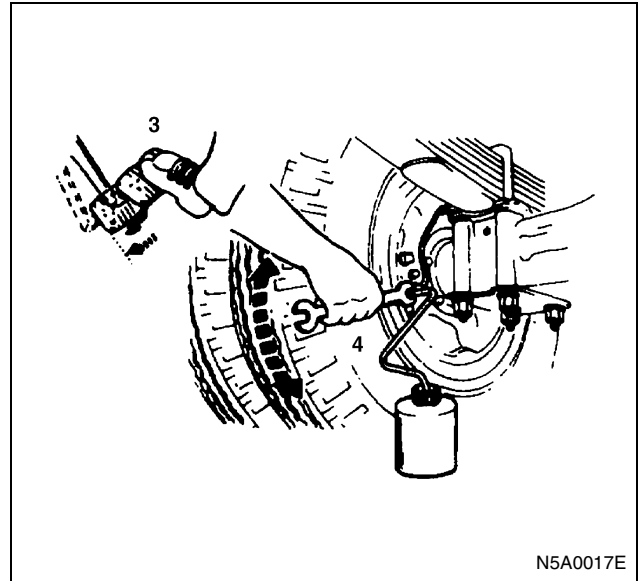
2. Fill the brake fluid reservoir (1) up to the "MAX" level with clean brake fluid.
It may be necessary to replenish the brake fluid reservoir several times during the bleeding procedure to maintain the required level of brake fluid.



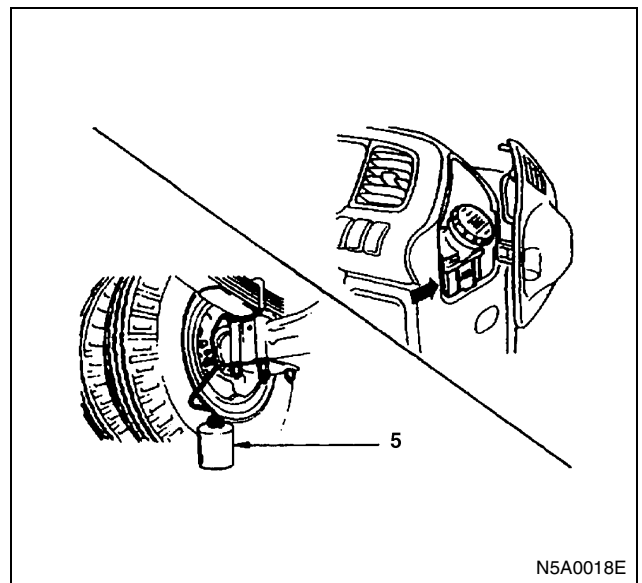
Notice:

Pour the brake fluid carefully so as not to produce air bubbles.

3. Remove the right hand rear wheel cylinder (left hand rear wheel cylinder if ABS is equipped) bleeder screw rubber cap and wipe it clean.
4. Connect one end of a vinyl tube (2) to the bleeder screw.
5. Insert the other end of the vinyl tube into a transparent container approximately 1/3 full of brake fluid.
6. Depress the brake pedal (3) slowly 3 times and hold it depressed.



7. Loosen the bleeder screw (4) approximately 1/2 of a turn.
This will release the brake fluid with air bubbles into the transparent container (5).



8. When the brake fluid being released into the transparent container is completely free of air bubbles, retighten the bleeder screw (4).
9. Slowly release the brake pedal.
10. Replace the bleeder screw rubber cap.

Notice:

In order to bleed the air completely from the brake line, repeat the above procedures.

Bleeding of the brake fluid circuit should be performed for front wheel 10 times or more, for rear wheel 15 times or more.

11. Repeat Steps 3 through 10 for each bleeder screws as mentioned before.
12. After the air bleeding procedure is finished in all wheels, depress the brake pedal, and verify wheth-

er there is no abnormality in operation of the brake system.

13. After the air bleeding procedure for individual wheel is completed, inspect the fluid level of the reservoir tank. If it is insufficient, replenish brake fluid. Do not overfill above "MAX" level.
14. Stop the engine.

Hydraulic Booster Line Bleeding

Bleeding Precautions

After removing the hydro boost assembly or piping and making repairs, do not run the vehicle until you perform the below-described air bleeding and then verify that everything is normal, including hydro boost boosting and accumulator operation.

Bleeding Procedure

1. Attach the hydro boost and the master cylinder to the vehicle and connect the piping.
2. Fill the hydro boost reservoir with hydraulic oil between its minimum and maximum range.
3. Turn the engine on for about 5 seconds.
4. Then turn the engine off and check the quantity of hydraulic oil in the reservoir.
5. If the hydraulic oil is below the minimum, pour in more hydraulic oil so that it is in the range from minimum to maximum.
6. Repeat the above steps 2 — 5 until there is no foaming or change in the level of the hydraulic oil in the reservoir. But if the hydraulic oil foams during the above steps, let it stand for a while, wait for the foam to dissipate, then continue the work.
7. With the engine on, repeatedly press the brake pedal slowly about five times.
8. Then turn the engine off and check the quantity of hydraulic oil in the reservoir. If the hydraulic oil is below the minimum, once again pour in more hydraulic oil so that it is in the range from minimum to maximum.
9. Leaving the engine off, repeatedly press the brake pedal at least ten times.
10. Verify that there is no foam or change in the level of the hydraulic oil in the reservoir. If any foam remains, let it stand for a while, wait for the foam to dissipate, then repeat the above steps 7 — 9.
11. If it is necessary at this time to bleed out the air from the brake fluid pressure system, such as the master cylinder or the wheel cylinder, be sure to first complete step 10 above and make sure that the engine is on.
12. With the engine on, strongly press the brake pedal as far as the booster full load region slowly and repeatedly about 30 times (for 1 — 3 seconds each time). When doing so, do not keep the pedal at the full load region (no longer than 1 second).
13. Then turn the engine off and repeatedly press the brake pedal at least 10 times.

14. Check the state of the hydraulic oil in the reservoir, and if there is no foaming or change in the level of the oil, the operation of bleeding the air out is considered completed. If any foam remains, let it stand for a while, wait for the foam to dissipate, then repeat the above steps 12 — 13.

Notice:

Precautions when bleeding the air from the brake fluid pressure system

When doing air bleeding of the brake fluid pressure system, such as the master cylinder or wheel cylinder, verify that the air has been bled out of the hydro boost, and make sure that the engine is on.

Be aware that if air bleeding of the brake fluid system is to be done with the engine off, air bleeding cannot be done.

If air bleeding of the brake fluid pressure system is to be done at the same time as air bleeding of the hydro boost, do so when the operation of the above hydro boost air bleeding method 10 has been completed.

Supply Parts Replacement

1. The hydro boost is a precision part that operates with high-pressure hydraulic oil. Never remove any parts from the hydro boost except replacement parts.
Trouble may occur if a part other than a replacement part is removed and a non-matching part is included or the assembly is bad. For example, misoperation may occur and the brake becomes ineffective, or a bad seal may allow high-temperature hydraulic oil under high pressure to spatter and cause a burn.
2. The hydraulic oil to be used for the hydro boost is ATF DEXRON® III. Using any other hydraulic oil could adversely affect the rubber parts and cause poor operation or oil leakage.
In particular, the hydraulic oil for the hydro boost is quite different from the brake fluid that is used in the master cylinder.
Be careful that hydro boost parts do not come into contact with the brake fluid for the master cylinder, and that master cylinder parts do not come into contact with the hydraulic oil for the hydro boost.
Any mixing together of the hydraulic oil for the hydro boost and the brake fluid for the master cylinder could cause degradation such as the swelling of rubber parts, brake failure due to oil leakage or bad operation, or a serious mishap such as a vehicle fire caused by brake friction.
3. Operation of the pump while the engine is on will cause the hydro boost hydraulic oil to get hot. In particular, frequent repeated operation of the brake will sometimes increase the temperature of the hydraulic oil in the hydro boost assembly to 100°C (212°F) or more. Be careful in handling.
When performing work such as removing the hydro boost assembly from the vehicle, before starting

the work, first turn the engine off, wait 30 minutes, and verify that the temperature has cooled off.

4. Even when a long time passes after the engine is turned off, the high-pressure hydraulic oil in the accumulator of the hydro boost remains stored under pressure.

Before removing the hydro boost assembly or piping, be sure to repeatedly press the brake pedal at least ten times with the engine off, and make sure the pressure of the hydraulic oil in the accumulator has been reduced to atmospheric pressure before doing the work.

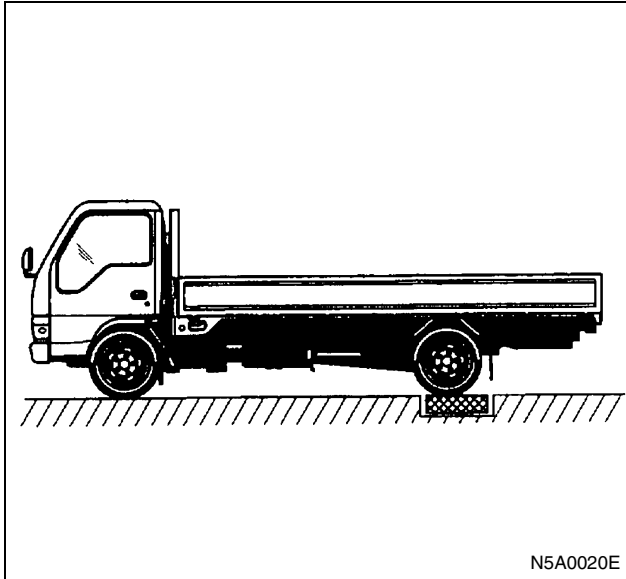
In particular, when removing the replacement-part accumulator from the hydro boost assembly, the hydraulic oil may spatter if it remains stored under high pressure inside the accumulator, so be careful of this.

Parking Brake

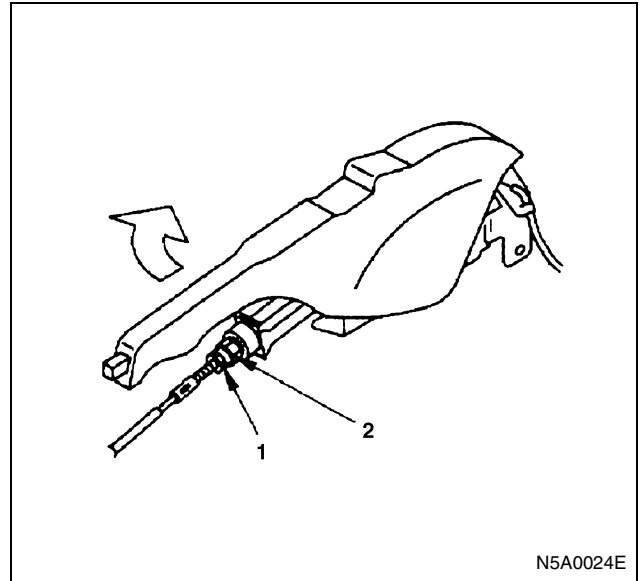
Parking Brake Adjustment

Before beginning to adjust the parking brake, park the vehicle on a level surface, chock all of the wheels, and place the parking brake lever in the released (off) position.

Then loosen the parking brake control wire lock nut (1), and turn the adjuster (2) to completely loosen the parking brake control wire.



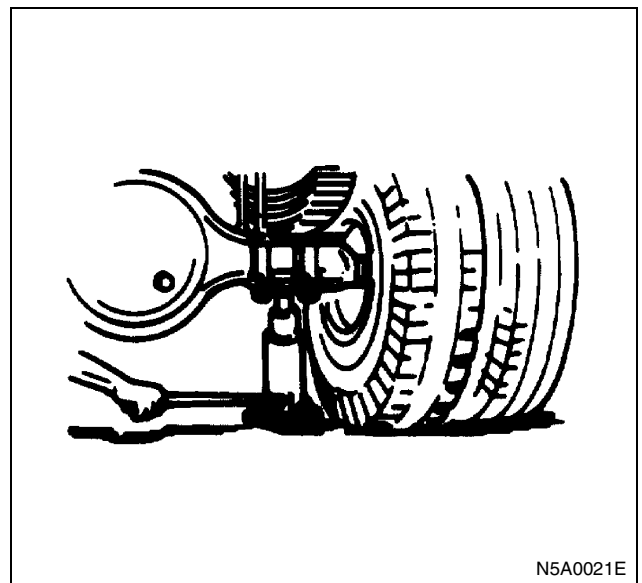
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N5A0024E

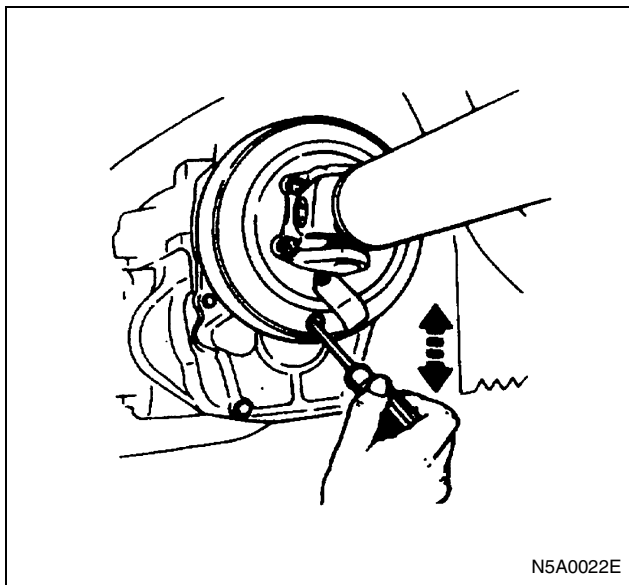
Parking Brake Lining Clearance Adjustment

1. Jack up the rear axle until the wheels can be turned freely.



N5A0021E

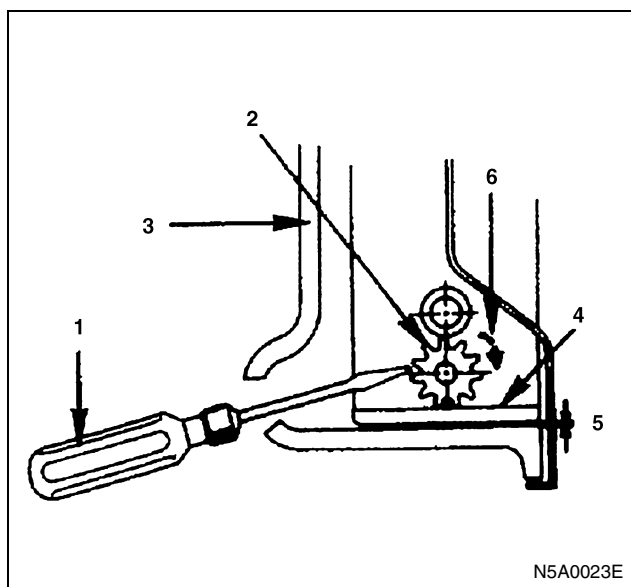
2. Remove one of the two check hole covers from the parking brake drum.
3. Rotate the brake drum to align the check hole with the adjusting screw.
4. Move the camshaft lever from side to side several times to center the brake shoes.
5. Insert a screwdriver into the check hole and rotate the adjusting screw by pushing it upward. Continue doing this until the brake shoes begin to drag on the drum.



6. Back off the adjusting screw the specified number of notches.

Adjusting Screw Notches and Clearance

Brake Type mm (in)	Notches	Clearance mm (in)
178 (7.008), 190 (7.480)	30	0.75 (0.029)
203.2 (8.000)	8	0.23 (0.009)



Legend

1. Screwdriver
2. Adjusting screw
3. Brake drum
4. Brake shoe
5. Clearance
6. Direction of brake shoe expansion (for 178 mm, 190 mm)
Brake Type (203 mm) is direction to the counter rotation.

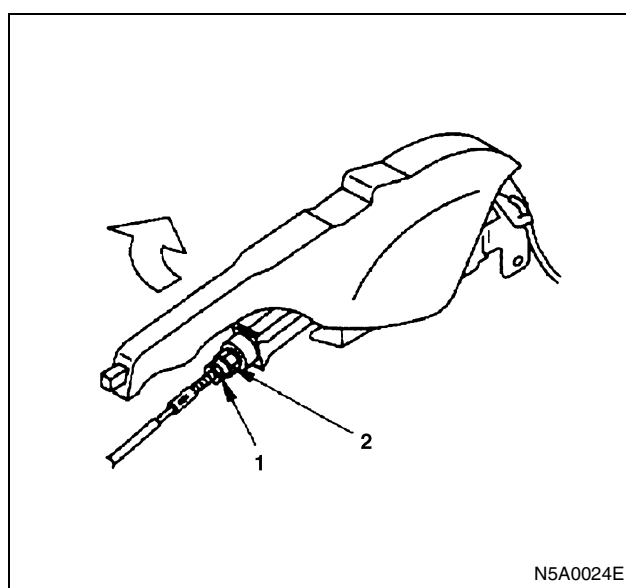
7. Reinstall the check hole cover.
8. Lower the rear wheels to the floor.

Parking Brake Lever Travel Adjustment

1. Fully set the parking brake lever and release it several times.
Leave the parking brake lever in the released position.
2. Loosen the parking brake control wire lock nut (1).
3. Turn the adjuster (2) to adjust the lever travel to the specified notches.

Parking brake lever travel at 147 N (15 kg / 33 lbs) notches

6 to 8



4. Retighten the control wire lock nut (1).
5. Check the parking brake lever travel (measured in notches).

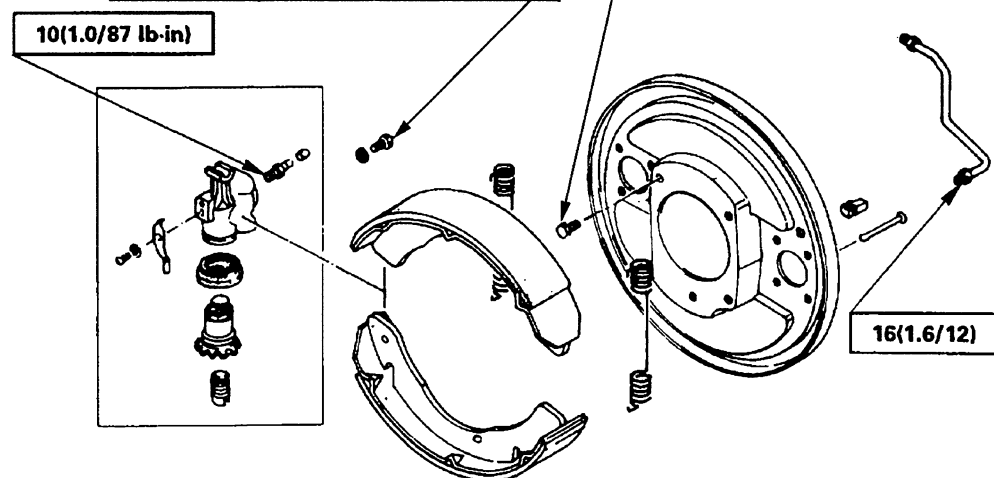
FIXING TORQUE

Front Wheel Brake (NHR / NKR / NPR / NQR)

N·m (kg·m / lb·ft)

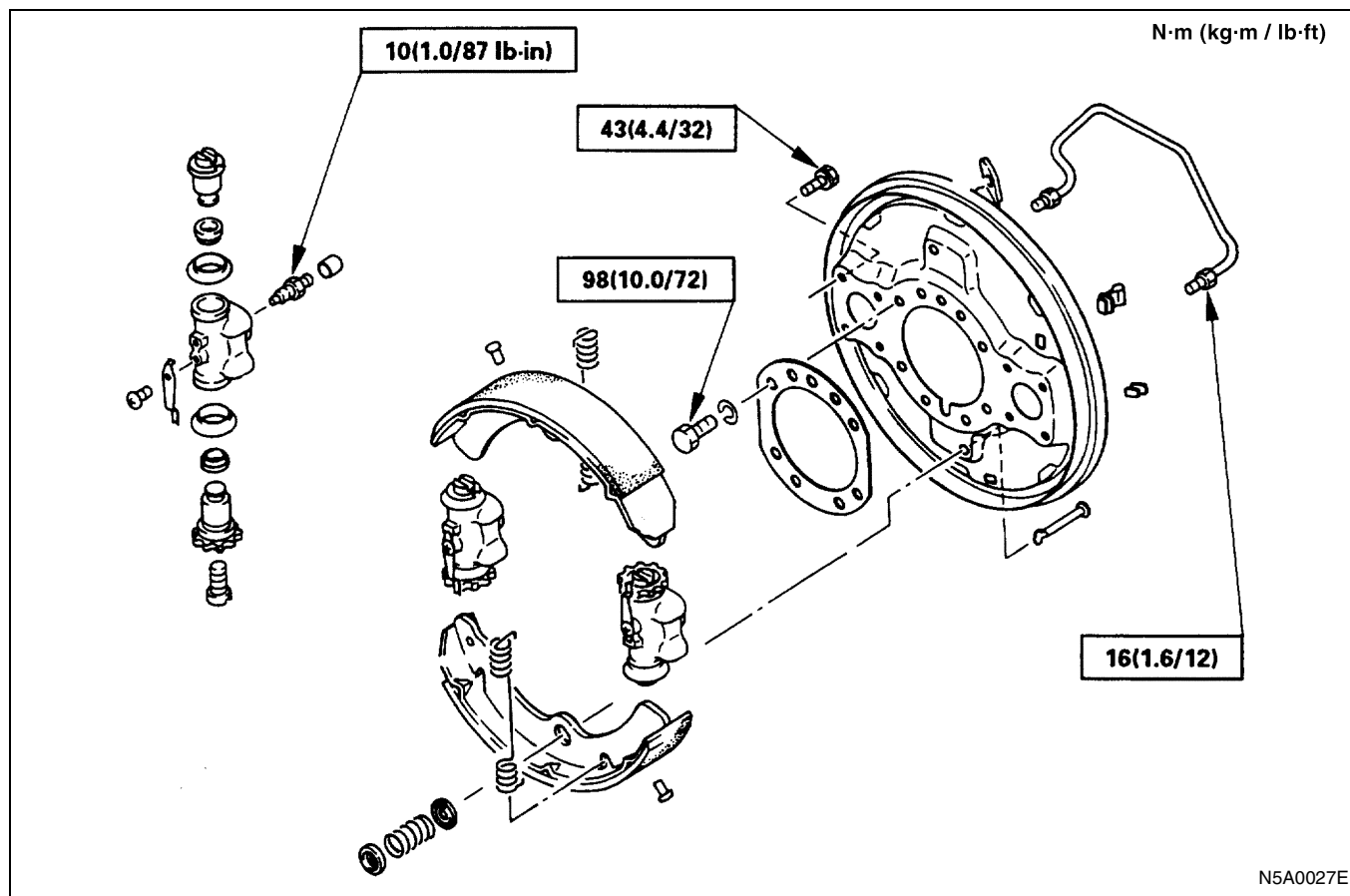
Drum Inside Dia. mm (in)	Lining Width mm (in)	Fixing Torque
279.4 (11.00)	60 (2.36)	27 (2.8 / 20)
300.0 (11.81)	75 (2.95)	34 (3.5 / 25)
320.0 (12.60)		43 (4.4 / 32)
320.0 (12.60)	100 (3.94)	74 (7.5 / 54)
320.0 (12.60)	120 (4.72)	94 (9.5 / 69)

Lining Width mm (in)	Fixing Torque
60 (2.36)	88 (9.0 / 65)
75 (2.95)	
100 (3.94)	
120 (4.72)	157 (16.0 / 116)



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Front Wheel Brake (NPS)



Rear Wheel Brake (Except Drum Inside Diameter 370 mm)

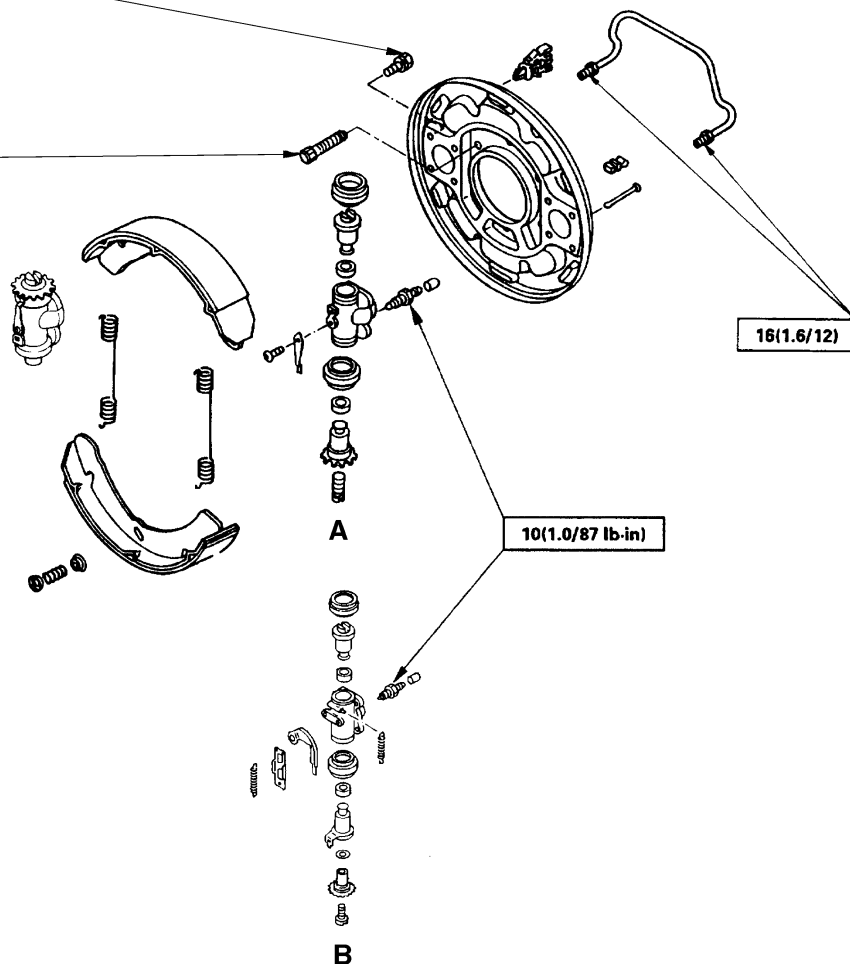
N·m (kg·m / lb·ft)

Drum Inside Dia. mm (in)	Lining Width mm (in)	—
228.6 (9.00)	75 (2.95)	34 (3.5 / 25)
240 (9.45)	60 (2.36)	25 (2.5 / 18)
279.4 (11.00)	60 (2.36)	27 (2.8 / 20)
290 (11.42)	75 (2.95)	25 (2.5 / 18)
300.0 (11.81)	75 (2.95)	34 (3.5 / 25)
320.0 (12.60)	75 (2.95)	43 (4.4 / 32)
	100 (3.94)	74 (7.4 / 55)
	120 (4.72)	94 (9.6 / 69)
260 (10.24)	90 (3.54)	43 (4.4 / 32)

Drum Inside Dia. mm (in)	Lining Width mm (in)	—
228.6 (9.00)	75 (2.95)	108 (11.0 / 80)
240 (9.45)	60 (2.36)	108 (11.0 / 80)
279.4 (11.00)	60 (2.36)	74 (7.5 / 54)
290 (11.42)	75 (2.95)	108 (11.0 / 80)
300.0 (11.81)	75 (2.95)	* 44 (4.5 / 33) **108 (11.0 / 80)
320.0 (12.60)	75 (2.95)	108 (11.0 / 80)
	100 (3.94)	108 (11.0 / 80)
	120 (4.72)	157 (16.0 / 116)
260 (10.24)	90 (3.54)	108 (11.0 / 80)

*1

**2



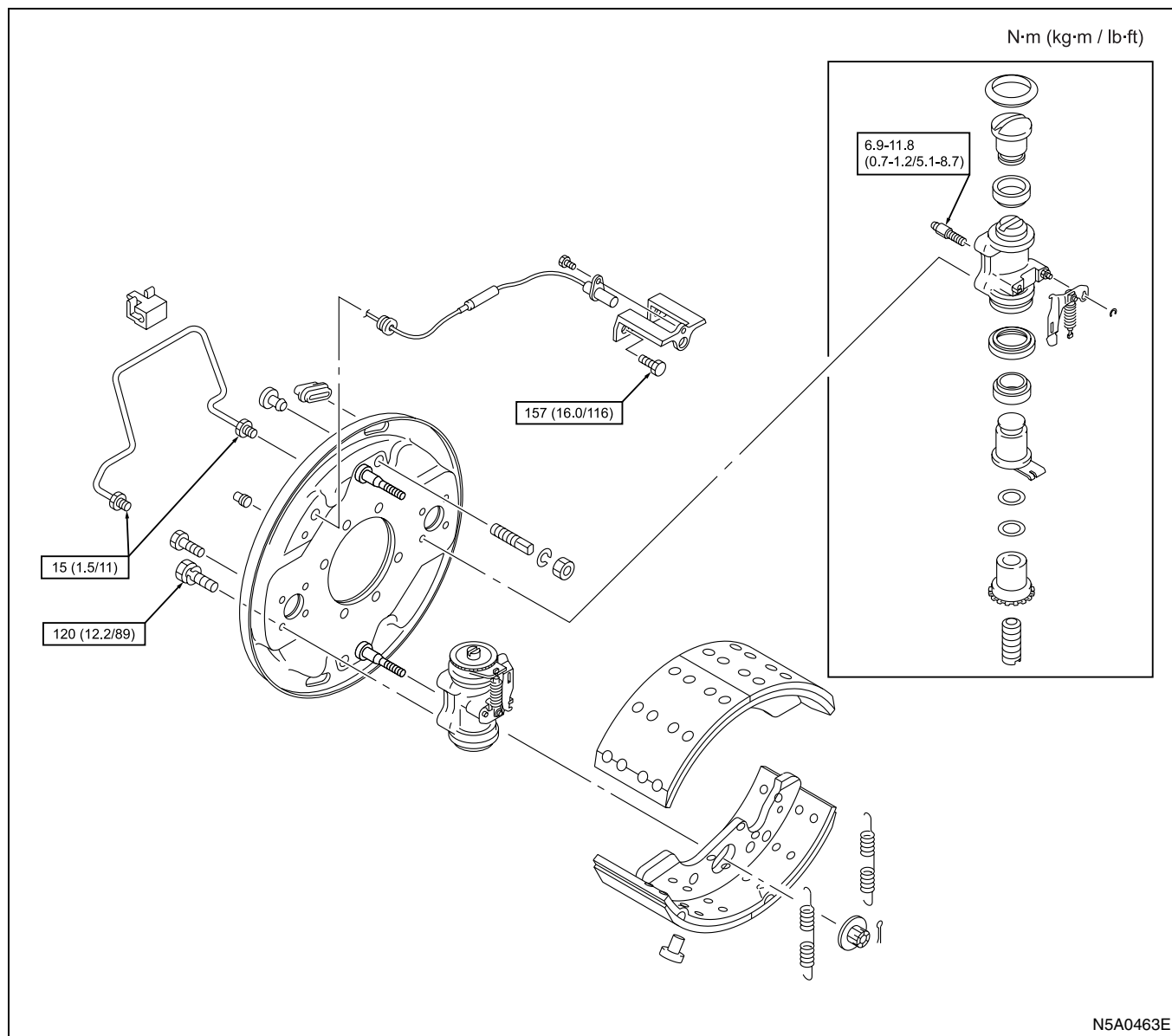
N5A0028E

Legend

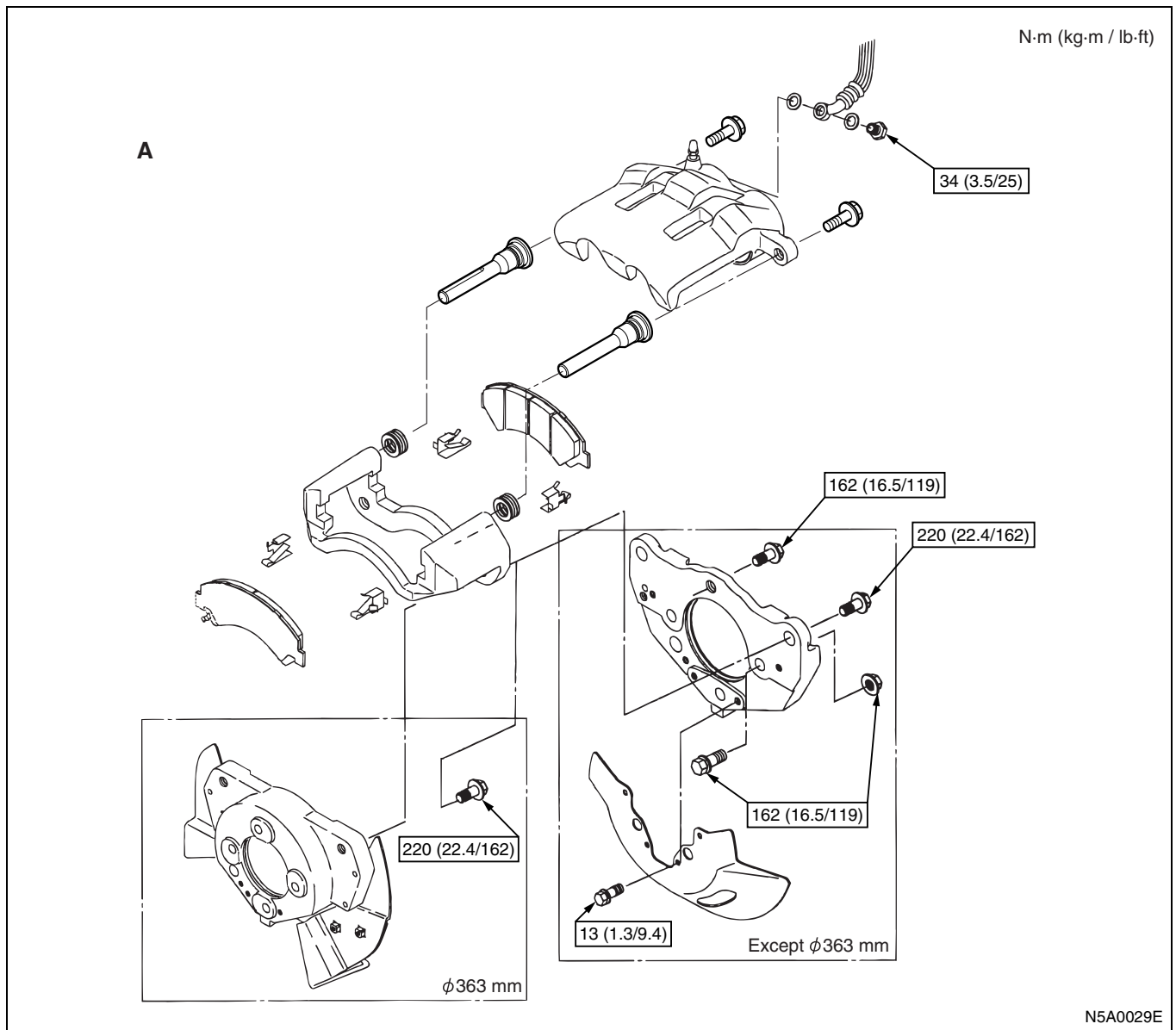
- A. Without auto-adjuster
B. With auto-adjuster

1. Single tire models
2. Dual tire models

Rear Wheel Brake (Drum Inside Diameter 370 mm)

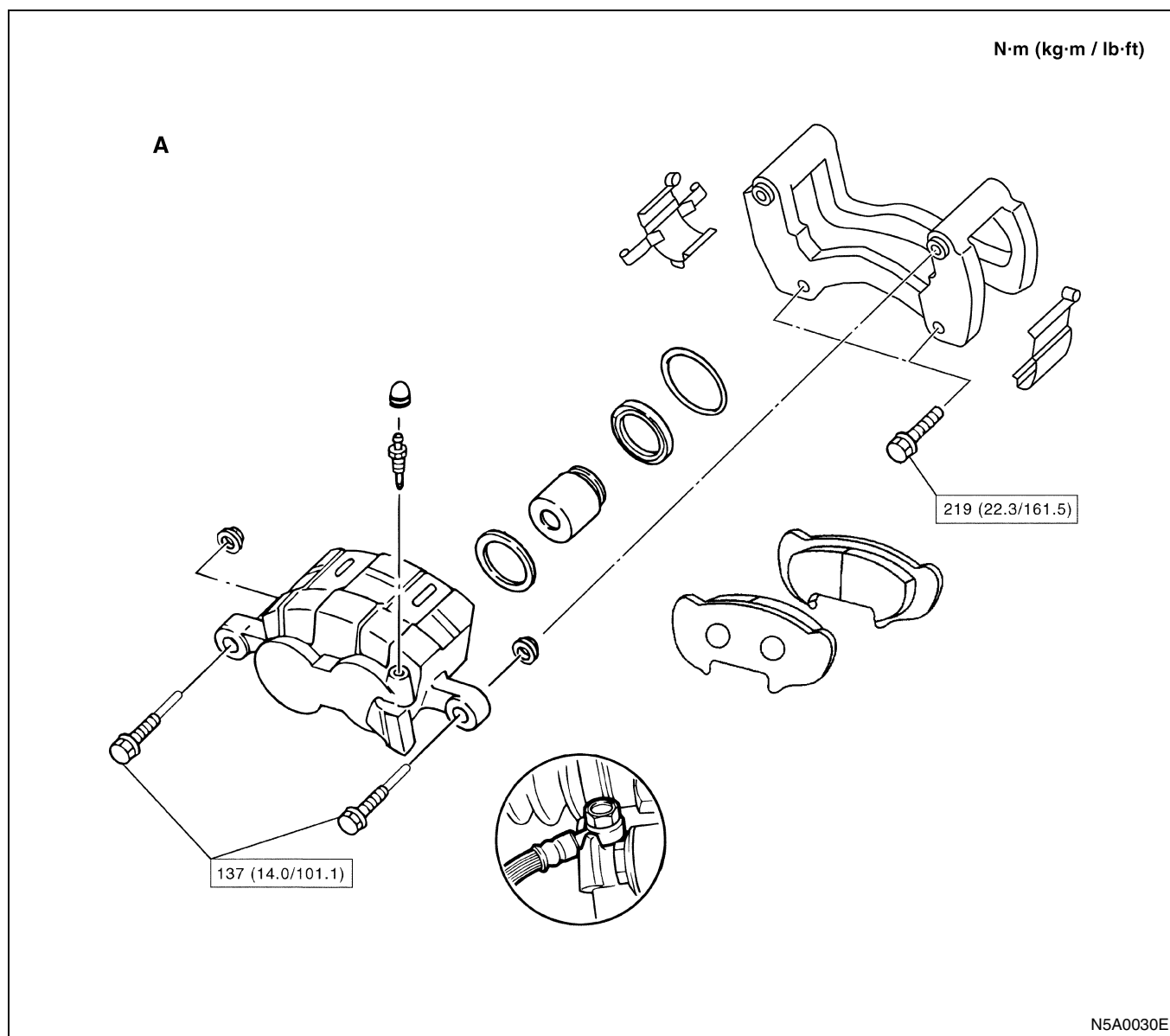


Front Disc Brake (NKR / NPR / NQR)

**Legend**

A. Leaf spring suspension models (Rigid axle type)

Front Disc Brake (NKR)

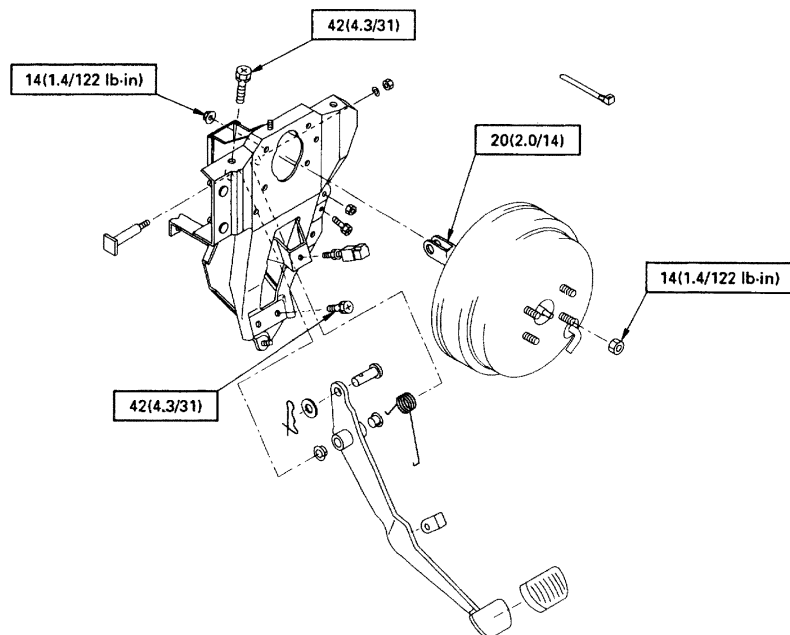


Legend

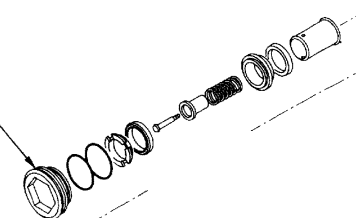
A. Independent suspension models

Brake Pedal and Control (Vacuum Booster Type)

N·m (kg·m / lb·ft)



Master cyl. inside diameter	
∅ 30.1mm	44 (4.5/33)
∅ 28.5mm	40 (4.1/30)
∅ 31.7mm	44 (4.5/33)
∅ 34.9mm	49 (5.0/37)



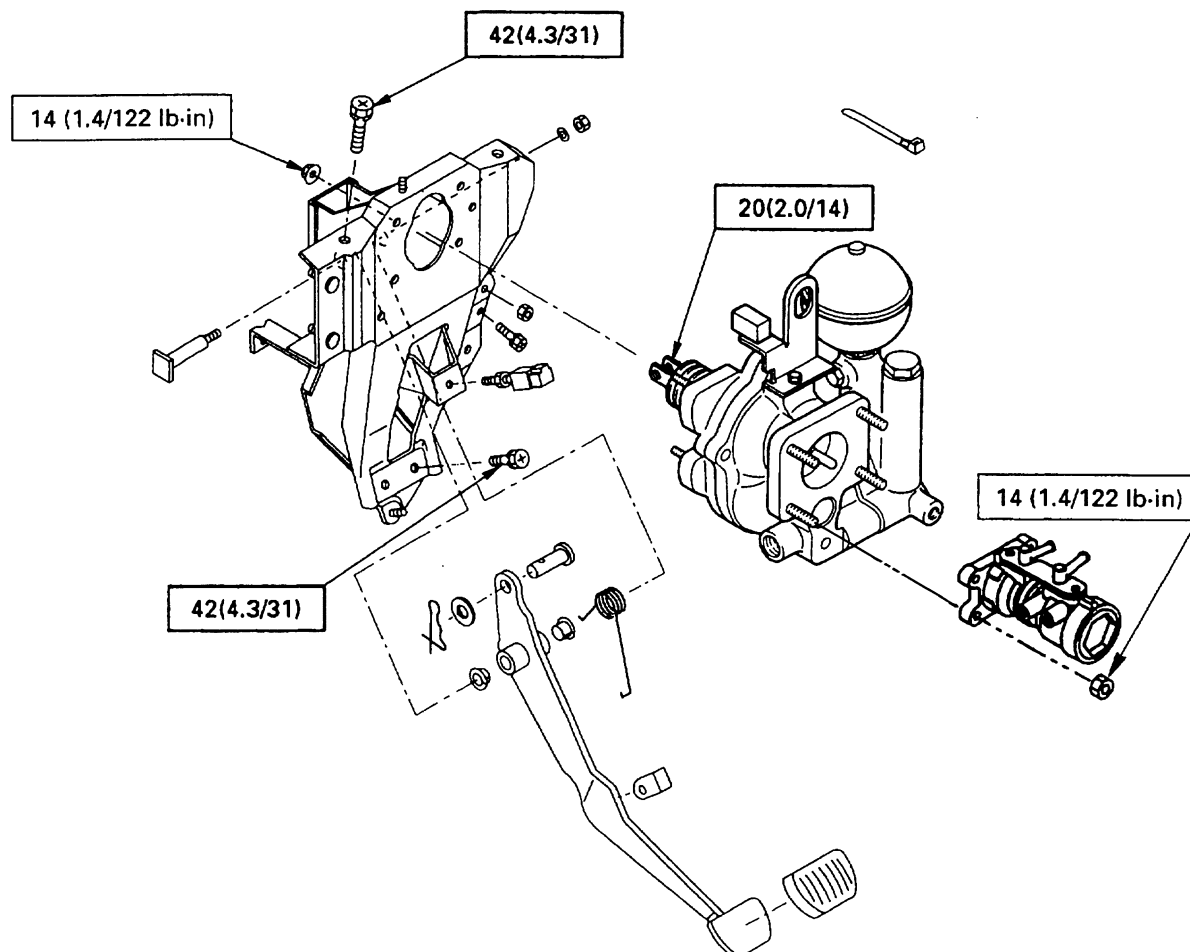
14(1.4/122 lb-in)

Master cyl. inside diameter	
∅ 30.1mm	44 (4.5/33)
∅ 28.5mm	40 (4.1/30)
∅ 31.7mm	44 (4.5/33)
∅ 34.9mm	49 (5.0/37)

N5A0031E

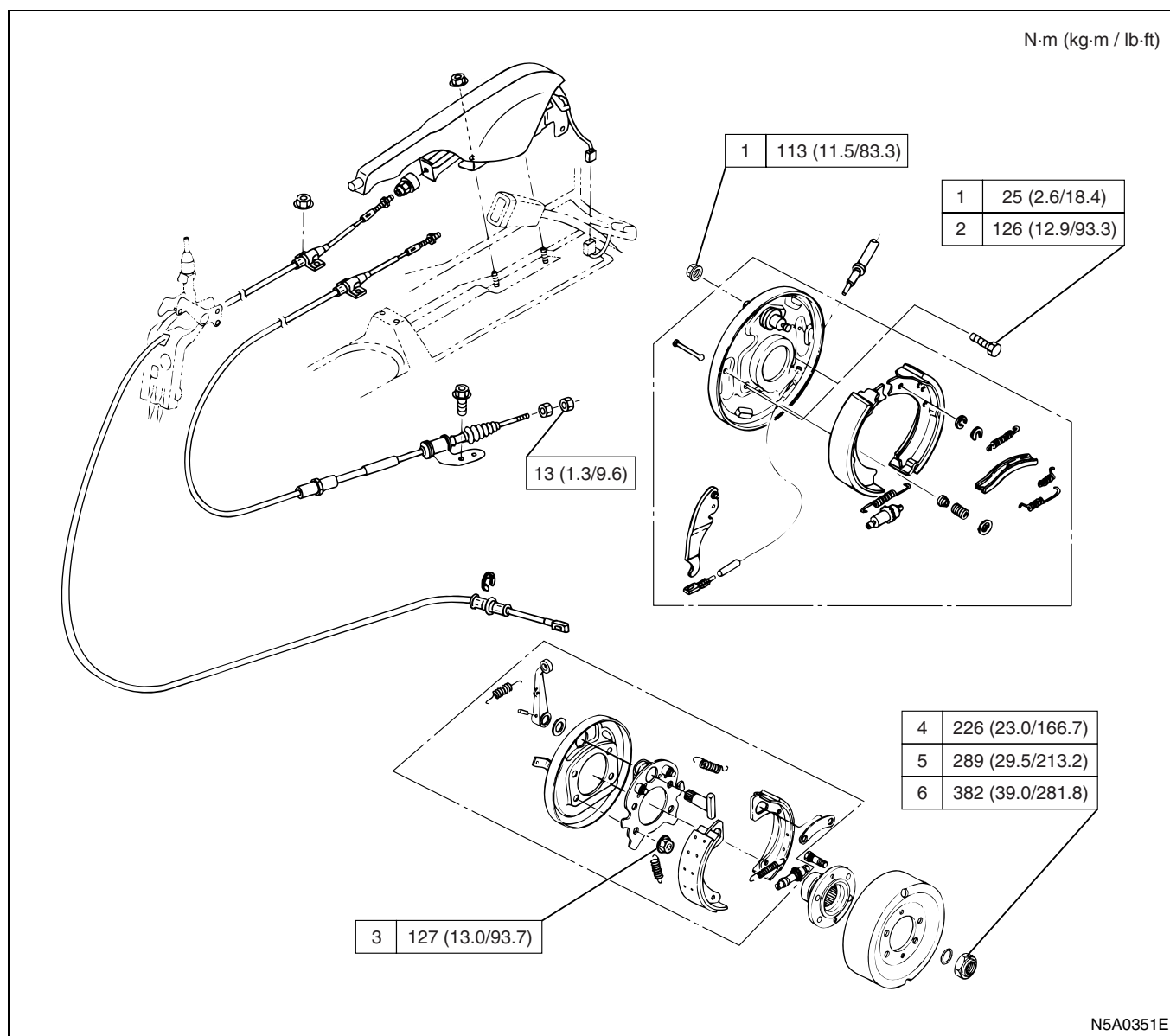
Brake Pedal and Control (Hydraulic Booster Type)

N·m (kg·m / lb·ft)



N5A0032E

Parking Brake

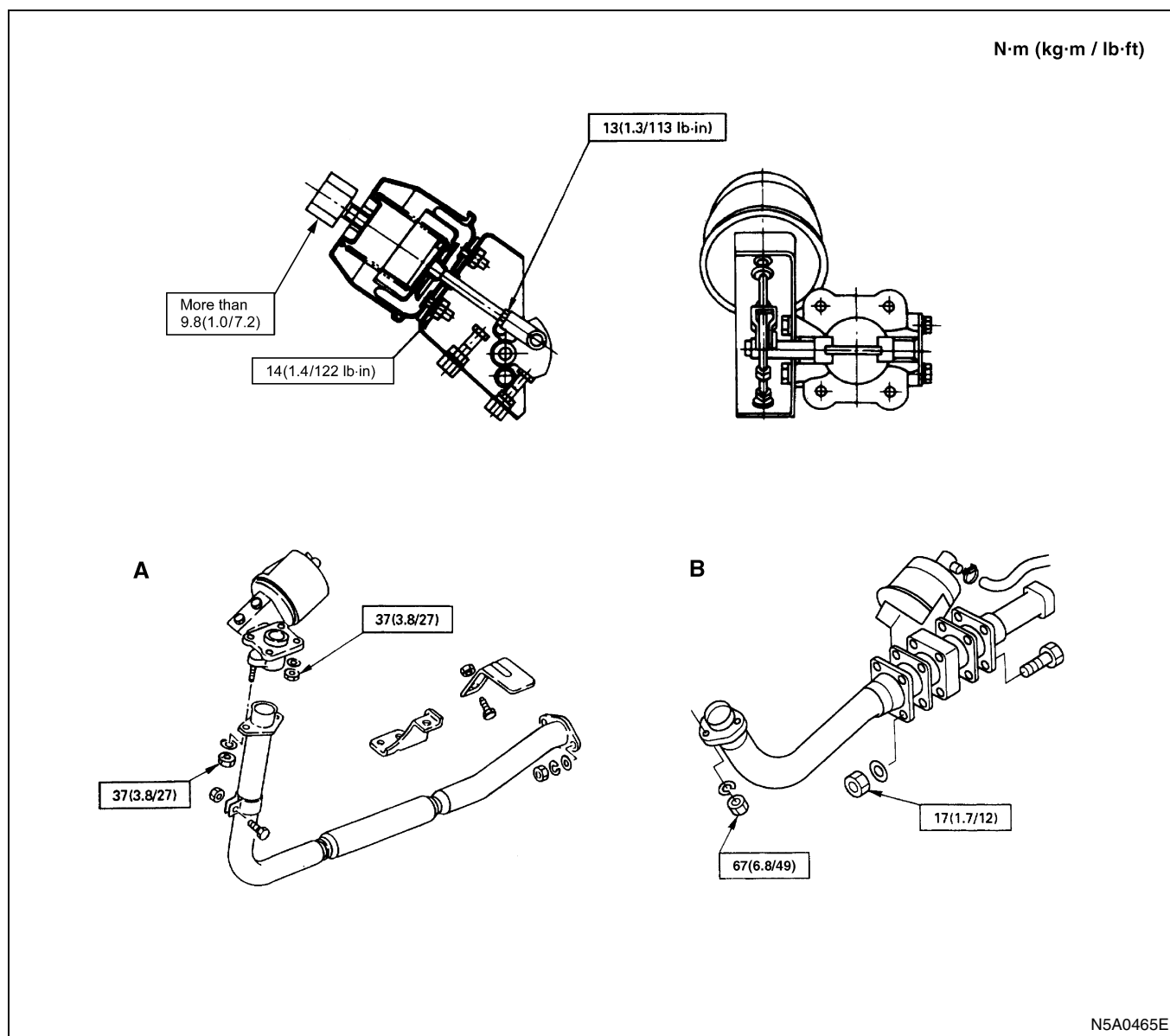


Legend

1. ϕ 178 mm parking brake
2. ϕ 190 mm parking brake
3. ϕ 203 mm parking brake

4. MSB type transmission
5. MYY type transmission
6. MZZ type transmission

Exhaust Brake



Legend

A. 4J engine without turbocharger

B. 4J engine with turbocharger and 4H engine

SPECIAL TOOLS

Hydraulic Brakes

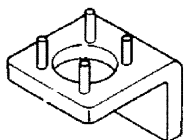
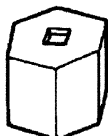
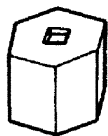
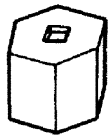
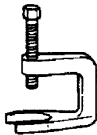
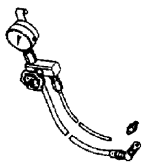
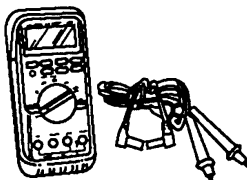
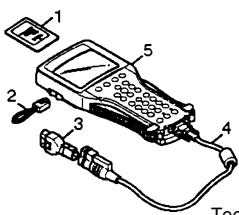
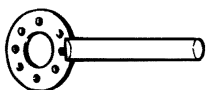
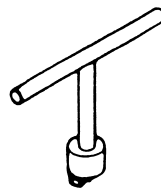
Illustration	Tool Number / Description / Remarks
 5884023710	5-8840-2371-0 / Master cylinder support plate
 5884023700	5-8840-2370-0 / Wrench (Cylinder inside diame- ter 30.1 mm, 31.7 mm)
 5884023690	5-8840-2369-0 / Wrench (Cylinder inside diame- ter 28.5 mm)
 5884028050	5-8840-2805-0 / Wrench (Cylinder inside diame- ter 34.9 mm)
 5884022150	5-8840-2215-0 / Remover: steering wheel
 9852200260	9-8522-0026-0 / Return spring plier

Illustration	Tool Number / Description / Remarks
 5884021900	5-8840-2190-0 / Pres- sure gauge: brake fluid

Anti-lock Brake System (ABS)

Illustration	Tool Number / Description / Remarks
 5884002850	5-8840-0285-0 (J-39200) / High impedance multim- eter
 Tech 2	1. PCMCIA Card 2. RS232 Loop Back Connector 3. SAE 16/19 Adapter 4. DLC Cable 5. Tech 2

Parking Brakes

Illustration	Tool Number / Description / Remarks
 5884020430	5-8840-2043-0 / Flange holder
 1852370020	1-8523-7002-0 / Return spring remover

00-58 SERVICE INFORMATION

Illustration	Tool Number / Description / Remarks
 9852212310	 9-8522-1231-0 / Return spring setting tool