Recommended for approval

Siddhartha Insurance

Bhaktapur

JOB SPECIFICATION

Job Title : LIGHT VEHICLE BRAKE MECHANIC (L-2)

Sector : MECHANICAL ENGINEERING

Sub-Sector : AUTOMOTIVE

2046/8/23

Approved

046-6-11

Final

JOB SPECIFICATION

1 JOB TITLE: LIGHT VEHICLE BRAKE MECHANIC

LEVEL 2

2 JOB DESCRIPTION

The brake mechanic diagnoses services/repairs/replaces and adjusts components of the braking system in vehicles upto three tons.

3 LIST OF TASKS

1. Servicing/repairing drum brakes.
2. Servicing/repairing disc brakes.
3. Servicing/repairing master cylinder.
4. Servicing/repairing wheel cylinder.
5. Servicing/repairing brake booster.
6. Servicing/repairing hydraulic brake lines.
7. Servicing/repairing park brake.

4 QUALIFYING NOTES (entry requirements, etc.)

- Normal health, no special physical requirement demanded by this job.
- Educational requirements: able to read and write in order to understand specifications. Perform basic calculations.

TASK SPECIFICATION

TASK NO. 1

SERVICING/REPAIRING DRUM BRAKES

JOB TITLE: LIGHT VEHICLE BRAKE MECHANIC L-2

TASK ELEMENTS

1.1 Receives instructions verbal/written.
1.2 Dons protective clothing.
1.3 Selects appropriate tools and equipment.
1.4 Jacks up vehicle.
1.5 Removes wheels, brake drums and brake shoes.
1.6 Inspects and reports on condition of brake shoes/drums.
1.7 Removes brake shoes and linings.
1.8 Replaces brake shoes and linings.
1.9 Refits brake shoes.
1.10 Cleans/repairs brake drums.
1.11 Refits brake drums and wheels.
1.12 Adjusts gap between brake drums and brake shoes.
1.13 Jacks down vehicle.
1.14 Tightens wheel nuts.
1.15 Tests brakes.
1.16 Cleans and returns tools and equipment.

TASK SPECIFICATION

TASK PERFORMANCE REQUIREMENTS

A vehicle, workshop manual, jack/stands, open ended/ring and socket spanners, screwdrivers (flat and phillips), pliers, hammers, wheel nut spanners, brake adjusting tool, riveting machine, brake shoes, brake linings, emery paper, drill machine, rivets, kerosene, jute, waste rags, cleaning brush, cleaning fluid or alcohol, files, safety goggles.

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TASK PERFORMANCE STANDARDS

Mechanic dressed in appropriate safety clothing. Appropriate hand tools and equipment selected. Vehicle jacked up safely. Wheels/brake drums and brake shoes removed as specified without damage. Faulty/inefficient/damaged components of the brake system identified. Brake shoes and linings removed and replaced as specified without damage. Brake shoes refitted as specified without damage. Brake drums made free of rust oil and grease. Drums and wheels refitted as specified without damage. Clearance between brake drums and shoes adjusted as specified. Vehicle downed safely. Wheel nuts tightened as specified method and torque without damage. Brakes serviced/repaired and adjusted tested for desired performation as per manufacturer's specifications. Tools and equipment cleaned and returned to specified place.

8

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
1	1	Knowledge of use of workshop manual, diagram and parts catalogue.		Reading and interpretation of manufacturer's specifications, workshop manual and parts catalogue.	First aid practicing and reporting. Safety and health regulations.
	3	Knowledge/care/use/types and application of hand tools and equipment such as brake adjusting tool, spanners, open ended/ring and socket spanners, screwdriver, pliers, drill machine and riveting machine, jack/stands etc.			Hazards involved in using electrical drill and riveting machine. Use of safety goggles.
	4	Knowledge and identification of jacking points and procedure for jacking up vehicle.			Hazards involved in jacking vehicle and working under jacked vehicle.
	5	Knowledge and procedure of removing wheels/brake drums and brake shoes.			
	6	Knowledge/types/application and operation of common brake shoe arrangement and procedure of inspecting and reporting condition of brake shoes and drums.			
	7	Knowledge and methods of removing brake shoes/linings.			Hazards involved in using electrical drill machine.
	8	Knowledge/care/use and applications of riveting machine and procedures of replacing brake shoes/linings.			Hazards involved in using riveting machine.

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
1	9	Knowledge and procedure of refitting brake shoes.			
	11	Knowledge and procedure of refitting brake drums and wheels.			
	12	Knowledge and purpose of gap between brake drums and shoes and procedure of adjusting gap between brake drums and shoes.			
	13	Knowledge and procedure of jacking down and removing jack/stands.			
	14	Knowledge and procedure of tightening wheel nuts.			
	15	Knowledge and procedure of testing brakes system.	Braking distance according to road/speed and load condition.		Hazards involved in running engine.
	16	Knowledge and procedure of cleaning and returning tools and equipment in proper place.			

TASK PERFORMANCE TEST (skill assessment)

TASK TITLE: SERVICING/REPAIRING DRUM BRAKES L-2

11 TASK NO. 1

LOCATION OF TEST

CANDIDATE'S NAME

EVALUATORS' NAMES

12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	DID THE CANDIDATE ?		
	1.1 Dress in appropriate safety clothing.		
	1.2 Select appropriate hand tools and equipment.		
	1.3 Jack up vehicle safely.		
	1.4 Remove wheels, brake drums and brake shoes as specified without damage.		
	1.5 Identify faulty/inefficient and damaged components of drum brake system.		
	1.6 Remove and replace brake shoes/linings as specified without damage.		
	1.7 Refit brake shoes as specified without damage.		
	1.8 Clean brake drums to remove rust oil/grease.		
	1.9 Refit drums and wheels as specified without damage.		
	1.10 Adjust clearance between brake drums/ shoes as specified.		
	1.11 Jack down vehicle safely.		
	1.12 Tighten wheel nuts as specified methods and torque without damage.		
	1.13 Service/repair/adjust and test drum brakes in accordance with manufacturer's specification.		

TASK PERFORMANCE TEST (skill assessment)

TASK TITLE: SERVICING/REPAIRING DRUM BRAKES L-2

11 TASK NO. 1

LOCATION OF TEST

CANDIDATE'S NAME

EVALUATORS' NAMES

12 TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
DID THE CANDIDATE ?		
1.14 Clean and return tools and equipment to specified places.		
1.15 Complete the test within specified time.		

TASK SPECIFICATION

TASK NO. 2

SERVICING/REPAIRING DISC BRAKES

JOB TITLE: LIGHT VEHICLE BRAKE MECHANIC L-2

TASK ELEMENTS

2.1 Receives instructions verbal/written.
2.2 Dons protective clothing.
2.3 Selects appropriate tools and equipment.
2.4 Jacks up vehicle.
2.5 Removes wheels and disc pads.
2.6 Inspects and reports on condition of disc pads and discs.
2.7 Removes calipers and brake discs.
2.8 Cleans and repacks wheel bearings.
2.9 Replaces hub seals.
2.10 Refits discs.
2.11 Adjusts wheel bearings pre-load.
2.12 Refits calipers, new disc pads and wheels.
2.13 Jacks down vehicle.
2.14 Tightens wheel nuts and replaces wheel caps.
2.15 Tests brakes.
2.16 Cleans and returns tools and equipment.

TASK SPECIFICATION

TASK PERFORMANCE REQUIREMENTS

A vehicle with disc brakes, workshop manual, open ended/ring and socket spanners, screwdrivers (flat/phillips) pliers, hammers, jack/stands, cleaning fluid, wheel bearing and grease, hub seal, calipers, new disc pads, wheel nuts, spanners, brake disc, kerosene, jute/waste rags, cleaning brush.

7

TASK PERFORMANCE STANDARDS

Mechanic dressed in appropriate safety clothing. Appropriate hand tools selected. Vehicle jacked up safely, wheels and disc pads removed without damage. Faulty/inefficient/damaged components of disc brake identified. Calipers and brake discs removed without damage. Mud and foreign materials removed from wheel bearings, repacked with specified grease with standard process. Hub seals replaced without damage. Discs refitted without damage. Wheel bearings for pre-load adjusted as specified. Calipers, new disc pads and wheels refitted without damage. Vehicle removed from jacks safely. Wheel nuts tightened in specified sequence firmly without stripping threads. Wheel caps replaced without damage. Disc brakes serviced/repaired and adjusted, tested for desired performation accordingly to manufacturer's specifications. Tools cleaned and returned to specified place.

8

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
2				Reading and interpretation of manufacturer's specifications, workshop manual and parts catalogue.	First aid practicing and reporting. Safety and health regulations.
	2	Knowledge/types and application of protective clothing.			
	3	Knowledge/care/use/types and application of hand tools such as open ended/ring and socket spanners, screwdrivers, pliers, hammers, jack/stands, electrical drill machine.			Hazards involved in using hand tools and equipment.
	4	Knowledge and care of jacking procedure and identification of jacking points.			Hazards involved in jacking vehicle and working under jacked vehicle.
	5	Knowledge of removing procedure of wheel and disc pads.			
	6	Knowledge of types, application and operation of common disc brake and its components.		Identify the parts indicated in pictorial view of the components.	
	7	Knowledge of removing procedure of calipers and brake discs.			
	8	Knowledge of cleaning and repacking procedure of wheel bearings.			Hazards involved in cleaning fluid.
	9	Knowledge of refitting procedure of bearings and replacing hub seals.			

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
2	10	Knowledge of refitting procedure of discs.			
	11	Knowledge of effecting pre-load of bearing and adjusting procedure of wheel bearing pre-load.			
	12	knowledge of refitting procedure of calipers, new disc pads and wheels.			
	13	Knowledge of jacking down procedure of vehicle and removing procedure of jack/stands.			
	14	Knowledge of tightening procedure of wheel nuts and replacing procedure of wheel caps.			
	15	Knowledge of testing methods of brakes and braking regulations and stopping distance.	Braking distance according to speed/load and road condition.		Hazards involved in running engine.
	16	Knowledge of cleaning and returning procedure of tools.			Hazards involved in using cleaning fluid.

TASK PERFORMANCE TEST (skill assessment)

TASK TITLE: SERVICING/REPAIRING DISC BRAKES L-2

11 TASK NO. 2

LOCATION OF TEST

CANDIDATE'S NAME

EVALUATORS' NAMES

12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	DID THE CANDIDATE ?		
	2.1 Dress in appropriate safety clothing.		
	2.2 Select appropriate hand tools.		
	2.3 Jack up vehicle safely.		
	2.4 Remove wheels/disc pads without damage.		
	2.5 Identify faulty/inefficient and damaged components of disc brakes system.		
	2.6 Remove calipers and brake discs without damage.		
	2.7 Remove mud and foreign materials from wheel bearings and repack with specified grease with standard process.		
	2.8 Replace hub seals without damage.		
	2.9 Refit discs without damage.		
	2.10 Adjust wheel bearing pre-load as specified without damage.		
	2.11 Refit calipers, new disc pads and wheels without damage.		
	2.12 Jack down vehicle safely.		
	2.13 Tighten wheel nuts in specified sequence firmly without stripping threads.		
	2.14 Replace wheel caps without damage.		
	2.15 Service/repair and adjust and test for desire performance disc brakes according to manufacturer's specifications.		

TASK PERFORMANCE TEST (skill assessment)

	TASK TITLE: SERVICING/REPAIRING DISC BRAKES L-2	LOCATION OF TEST
11	TASK NO. 2	CANDIDATE'S NAME
		EVALUATORS' NAMES

12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	DID THE CANDIDATE ? --- 2.16 Clean and return tools to specified places. 2.17 Complete the test within specified time.		

TASK SPECIFICATION

TASK NO. 3

SERVICING/REPAIRING MASTER CYLINDER

JOB TITLE: LIGHT VEHICLE BRAKE MECHANIC L-2

TASK ELEMENTS

3.1 Receives instructions verbal/written.
3.2 Dons protective clothing.
3.3 Selects appropriate hand tools.
3.4 Fits guard covers over front guards.
3.5 Disconnects hydraulic pipes and master cylinder linkage.
3.6 Removes master cylinder.
3.7 Dismantles master cylinder.
3.8 Cleans master cylinder components.
3.9 Inspects/reports on condition of master cylinder components.
3.10 Replaces master cylinder components.
3.11 Reassembles master cylinder.
3.12 Refits master cylinder.
3.13 Reconnects master cylinder linkage ad hydraulic pipes.
3.14 Fills hydraulic fluid in the reservoir.
3.15 Bleeds and tests brake system.
3.16 Removes guard covers and cleans body.
3.17 Cleans and returns tools.

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS A vehicle, workshop manual, guard covers, open ended/ring/socket spanners, screwdrivers (flat/phillips) circlip plier, pliers, cleaning alcohol, hydraulic fluid, fluid container and hose, master cylinder, service kit, jute/waste rags, cleaning brush, hammers.
8	TASK PERFORMANCE STANDARDS Mechanic dressed in appropriate safety clothing. Appropriate hand tools selected. Guard covers over front guard fitted to prevent damage to vehicle paint work. Hydraulic pipes and master cylinder linkages disconnected as specified without damage. Master cylinder removed as specified without damage. Master cylinder dismantled as specified without damage. Mud and foreign materials cleaned from master cylinder components. Faulty/inefficient/damaged components of master cylinder identified. Master cylinder components replaced as specified without damage. Master cylinder reassembled as specified without damage. Master cylinder refitted without damage. Master cylinder linkages and hydraulic pipes reconnected as specified without damage. Hydraulic fluid in the reservoir filled as specified level Brake system bleeded as specified in sequence, no leakage allowed. Mastern cylinder serviced/repaired and bleeded tested for desired performantion according to manufacturer's specifications, Guard cover removed. Tools cleaned and returned to specified place.

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
3	1	Knowledge of use of workshop manual, diagram and parts catalogue		Reading and interpretation of manufacturer's specifications, workshop manual and parts catalogue.	First aid practicing and reporting. Safety and health regulations.
	2	Knowledge/types and application of protective clothing.			
	3	Knowledge/care/use/types and application of hand tools such as open ended/ring and socket spanners, screwdrivers, circlip pliers.			Hazards involved in using hand tools.
	4	Knowledge of efects of brake fluid to vehicle paint work and fitting procedure of guard covers.			
	5	Knowledge and disconnecting procedure of hydraulic pipes and master cylinder linkages.			
	6	Knowledge and care of removing procedures of master cylinder.			
	7	Knowledge/care of dismantling procedure of master cylinder.			
	8	Knowledge and function of cleaning Alcohol. Cleaning procedures of master cylinder components.			Hazards involved in cleaning alcohol.
	9	Knowledge of identification, operation of master cylinder components and reporting on condition of master cylinder components.			

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
3	10	Knowledge/care of replacing procedure of master cylinder components.			
	11	Knowledge and care of reassembling procedure of master cylinder.			
	12	Knowledge of refitting procedures of master cylinder to its original position.			
	13	Knowledge and procedure of reconnecting master cylinder linkage and hydraulic pipe of master cylinder.			
	14	Knowledge/use and fuction of hydraulic fluid and knowledge of filling procedure of hydraulic fluid in the reservoir.	Hydraulic technology diagram.		Hazards involved in handling brake fluid.
	15	Knowledge and procedure of bleeding in brake system. Knowledge and procedure of testing brake system.	Brake distance according to speed, load and road condition.		Hazards involved in running engine.
	16	Knowledge of removing procedure of guard covers and cleaning body.			
	17	Knowledge of cleaning and returning procedure of tools.			

TASK PERFORMANCE TEST (skill assessment)

TASK TITLE: SERVICING/REPAIRING MASTER CYLINDER L-2

11 TASK NO. 3

LOCATION OF TEST

CANDIDATE'S NAME

EVALUATORS' NAMES

12 TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
DID THE CANDIDATE ?		
3.1 Dress in appropriate safety clothing.		
3.2 Select appropriate hand tools.		
3.3 Fit guard covers over front guards to prevent damage to vehicle paint work.		
3.4 Disconnect hydraulic pipes and master cylinder linkage as specified without damage.		
3.5 Remove master cylinder as specified without damage.		
3.6 Dismantle master cylinder as specified without damage.		
3.7 Clean mud and foreign materials from master cylinder components.		
3.8 Identify faulty/inefficient and damaged of master cylinder components.		
3.9 Replace master cylinder components as specified without damage.		
3.10 Reassemble master cylinder as specified without damage.		
3.11 Refit master cylinder without damage.		
3.12 Reconnect master cylinder linkages and hydraulic pipes as specified without damage.		

TASK PERFORMANCE TEST (skill assessment)

	TASK TITLE: SERVICING/REPAIRING DRUM BRAKES L-2	LOCATION OF TEST
11	TASK NO. 3	CANDIDATE'S NAME
		EVALUATORS' NAMES

12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	DID THE CANDIDATE ? ----------		
	3.13 Bleed brake system as specified in sequence, no leakage allowed. Service repair and bleeded tested for desired performation according to manufacturer's specifications. 3.14 Remove guard covers. 3.15 Clean and return tools as specified places. 3.16 Complete the test wihin specified time.		

TASK SPECIFICATION

TASK NO. 4

SERVICING/REPAIRING WHEEL CYLINDER

JOB TITLE: LIGHT VEHICLE BRAKE MECHANIC L-2

TASK ELEMENTS

4.1 Receives instructions verbal/written.
4.2 Dons protective clothing.
4.3 Selects appropriate hand tools.
4.4 Removes hub caps and loosens wheel nuts.
4.5 Jacks up vehicle.
4.6 Removes wheels, brake drums and wheel cylinders.
4.7 Dismantles wheel cylinders.
4.8 Cleans wheel cylinder components.
4.9 Inspects and reports on condition of wheel cylinders.
4.10 Replaces wheel cylinder components.
4.11 Reassembles wheel cylinders.
4.12 Refits wheel cylinders brake shoes and drums.
4.13 Fits guard covers over front guards.
4.14 Refits wheels.
4.15 Bleeds brake system.
4.16 Jacks down vehicle.
4.17 Tightens wheel nuts and refits hub caps.
4.18 Tests brakes.
4.19 Cleans and returns tools.

TASK SPECIFICATION

7	TASK PERFORMANCE REQUIREMENTS A vehicle, workshop manual, jack/stands, open ended/ring/socket spanners, screwdrivers/pliers, hammers, wheel nut spanners, wheel cylinder service kit, cleaning alcohol, brake (hydraulic) fluid, fluid container, plastic hose, guard covers, emery paper, kerosene, jute waste rags, cleaning brush.
8	TASK PERFORMANCE STANDARDS Mechanic dressed in appropriate safety clothing. Appropriate hand tools selected. Hub caps removed and wheel nuts loosened without damage. Vehicle jacked up safely without injury. Wheels/brake drums and wheel cylinders removed as specified without damage. Wheel cylinders dismantled as specified without damage. Mud/iron particle and foreign materials removed from wheel cylinders components. Faulty/inefficient and damaged components of wheel cylinders components identified and replaced as per instruction without damage. Wheel cylinders reassembled as per instruction without damage. Wheel cylinders, brake shoes and brake drums refitted as specified without damage. Guard covers over front guards fitted to prevent damage to vehicle paint work. Wheels refitted without damage. Brake system bleeded as specified in sequence. No leakage allowed. Vehicle downed safely. Wheel nuts tightened with specified methods and torque without damage and hub cap refitted without damage. Brakes serviced/repaired and bleeded, tested accordant to manufacturer's specifications. Tools cleaned and returned to specified places.

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
4	1	Knowledge of use of workshop manual, diagram and parts catalogue		Reading and interpretation of manufacturer's specifications, workshop manual and parts catalogue.	First aid practicing and reporting. Safety and health regulations.
	2	Knowledge/types and application of protective clothing.			
	3	Knowledge/care/use/types and application of hand tools such as open ended/ring and socket spanners, screwdrivers, pliers, jack/stands, hammers, wheel nut wrench, wheel cylinder service kit, guard covers.			Hazards involved in using hand tools.
	4	Knowledge of removing method of hub caps and loosening wheel nuts.			
	5	Knowledge of identification of jacking points and procedure of jacking up vehicle.			Hazards involved in jacking vehicle and working under jacked vehicle.
	6	Knowledge of removing procedure of wheels/brake drums and wheel cylinders.			
	7	Knowledge of dismantling procedure of wheel cylinders.			
	8	Knowledge and function of cleaning alcohol and cleaning procedure of wheel cylinder components.			Hazards involved in hydraulic brake fluid.

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
4	9	Knowledge of types, identification and function of wheel cylinders and inspecting and reporting condition of wheel cylinders.			
	10	Knowledge of replacing procedure of wheel cylinder components.			
	11	Knowledge of reassembling procedure of wheel cylinders.			
	12	Knowledge of refitting procedure of wheel cylinders/brake shoes and drums.			
	13	Knowledge of effects of brake fluid on the paint work and fitting procedure of guard covers.			
	14	Knowledge of refitting procedure of wheels.			
	15	Knowledge of bleeding procedure of brake system.	Hydraulic technology and diagram.		Hazards involved in handling brake fluid.
	16	Knowledge of jacking down procedure of vehicle and removing jack/stands			
	17	Knowledge of tightening procedure wheel nuts and refitting procedure hub cap.			

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
4	18	Knowledge of testing procedure of brake system.	Braking distance according to road, speed and load condition.		Hazards involved in running engine.
	19	Knowledge of cleaning and returning procedure of tools.			

TASK PERFORMANCE TEST (skill assessment)

	TASK TITLE: SERVICING/REPAIRING WHEEL CYLINDERS L-2	LOCATION OF TEST
11	TASK NO. 4	CANDIDATE'S NAME
		EVALUATORS' NAMES

12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	DID THE CANDIDATE ? --- 4.1 Dress in appropriate safety clothing. 4.2 Select appropriate hand tools. 4.3 Remove hub caps and loosened wheel nuts without damage. 4.4 Jack up vehicle safely without injury. 4.5 Remove/wheels/brake drums and wheel cylinders as specified without damage. 4.6 Dismantle wheel cylinders as specified without damage. 4.7 Clean mud/iron particles and foreign materials from wheel cylinder components. 4.8 Identify faulty/inefficient and damaged components of wheel cylinders. 4.9 Replace wheel cylinder components as per instruction without damage. 4.10 Reassemble wheel cylinders as per instruction without damage. 4.11 Refit wheel cylinders/brake shoes and brake drums as specified without damage. 4.12 Fit guard covers over front guards to prevent damage to vehicle paint work. 4.13 Refit wheels without damage. 4.14 Bleed brake system as specified in sequence, no leakage allowed.		

TASK PERFORMANCE TEST (skill assessment)

TASK TITLE: SERVICING/REPAIRING WHEEL CYLINDERS L-2

11 TASK NO. 4

LOCATION OF TEST

CANDIDATE'S NAME

EVALUATORS' NAMES

12 TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
DID THE CANDIDATE ? --- 4.15 Jack down vehicle safely. 4.16 Tighten wheel nuts as specified methods and torque without damage and refit hub cap without damage. 4.17 Test wheel cylinder for service/repair and bleeding according to manufacturer's specifications. 4.18 Clean and return tools to specified places. 4.19 Complete the test wihin specified time.		

TASK SPECIFICATION

5

TASK NO. 5

SERVICING/REPAIRING BRAKE BOOSTER

JOB TITLE: LIGHT VEHICLE BRAKE MECHANIC L-2

TASK ELEMENTS

5.1 Receives instructions verbal/written.
5.2 Dons protective clothing.
5.3 Selects appropriate hand tools.
5.4 Removes brake booster.
5.5 Dismantles brake booster.
5.6 Inspects and reports on condition of brake booster.
5.7 Replaces brake booster components.
5.8 Reassembles brake booster.
5.9 Adjusts the output push rod setting.
5.10 Refits brake booster.
5.11 Tests booster operation.
5.12 Cleans and returns tools.

6

TASK SPECIFICATION

TASK PERFORMANCE REQUIREMENTS

A vehicle with brake booster, workshop manual, open ended/ring/socket spanners, screwdrivers, pliers, hammers, kerosene, jute/waste rags, cleaning brush.

7

TASK PERFORMANCE STANDARDS

Mechanic dressed in appropriate safety clothing. Appropriate hand tools selected. Brake booster removed as specified without damage. Brake booster dismantled as specified without damage. Faulty/inefficient/damaged components of the brake booster identified. Brake booster components replaced as required without damage. Brake booster reassembled as per instruction without damage. Output push rod setting adjusted as specified without damage. ~~Output push rod setting adjusted as specified without damage.~~ Brake booster refitted without damage. Brake booster serviced/repaired/adjusted and tested for desired operation according to manufacturer's specifications. Tools cleaned and returned to specified places.

8

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
5	1	Knowledge of use of workshop manual, diagram and parts catalogue		Reading and interpretation of manufacturer's specifications, workshop manual and parts catalogue.	First aid practicing and reporting. Safety and health regulations.
	2	Knowledge/types and application of protective clothing.			
	3	Knowledge/care/use of hand tools such as open ended/ring and socket spanners, screwdrivers, pliers, hammers.			Hazards involved in using hand tools.
	4	Knowledge of removing procedure of brake booster.			
	5	Knowledge of dismantling procedure of brake booster.			
	6	Knowledge of types/function and operation of brake booster and inspecting/reporting condition of brake booster.			
	7	Knowledge of replacing components of brake booster.			
	8	Knowledge of reassembling procedure of brake booster.			
	9	Knowledge of adjusting procedure of output push-rod setting.			
	10	Knowledge of refitting procedure of brake booster.			

TASK TRAINING DATA					
9	10				
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
5	11	Knowledge of testing procedure of brake booster operation.			Hazards involved in running engine.
	12	Knowledge of cleaning and returning procedure of tools.			

TASK PERFORMANCE TEST (skill assessment)

11	TASK TITLE: SERVICING/REPAIRING BRAKE BOOSTER L-2 TASK NO. 5	LOCATION OF TEST CANDIDATE'S NAME EVALUATORS' NAMES

12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	DID THE CANDIDATE ? 5.1 Dress in appropriate safety clothing. 5.2 Select appropriate hand tools. 5.3 Remove brake booster as specified without damage. 5.4 Dismantle brake booster as specified without damage. 5.5 Identify faulty/inefficient/damaged components of the brake booster. 5.6 Replace brake booster components as required without damage. 5.7 Reassemble brake booster as per instruction without damage. 5.8 Adjust output push-rod setting as specified without damage. 5.9 Refit brake booster without damage. 5.10 Test serviced/repaird and adjusted brake booster for desired operation according to manufacturer's specifications. 5.11 Clean and return tools to specified places. 5.12 Complete the test within specified time.		

TASK SPECIFICATION

5

TASK NO. 6

SERVICING/REPAIRING HYDRAULIC BRAKE LINES

JOB TITLE: LIGHT VEHICLE BRAKE MECHANIC L-2

TASK ELEMENTS

6.1 Receives instructions verbal/written.
6.2 Dons protective clothing.
6.3 Selects appropriate hand tools.
6.4 Jacks up vehicle.
6.5 Inspects and reports on condition of hydraulic pipe lines.
6.6 Removes damaged/blocked pipe lines.
6.7 Prepares new pipe lines.
6.8 Refits pipe lines and new hose.
6.9 Fits guards covers over front guards.
6.10 Bleeds the hydraulic system.

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6.11 Fills brake fluid in reservoir.
6.12 Jacks down vehicle.
6.13 Tests brake system.
6.14 Removes guard covers and cleans body.
6.15 Cleans and returns tools.

TASK SPECIFICATION

7

TASK PERFORMANCE REQUIREMENTS

A vehicle, workshop manual, open ended/ring and socket spanners, screwdrivers, pliers, hammers, jack/stands, pipe cutter, flaring tools, brake pipe, new brake hose, guard covers, brake fluid, fluid container plastic hose, cleaning brush, kerosene, jute/waste rags.

8

TASK PERFORMANCE STANDARDS

Mechanic dressed in appropriate safety clothing. Appropriate hand tools selected. Vehicle jacked up safely. Faulty/inefficient and damaged components of the hydraulic brake pipe lines identified. Damaged/blocked pipe lines removed without damage. New pipe lines prepared as per instruction without damage. Pipe lines and new hose refitted as per instruction without damage. Guard covers over front guards fitted to prevent damage to vehicle paint work. Hydraulic brake system bleeded as specified. Brake fluid in the reservoir filled as specified level. Vehicle downed safely. Hydraulic brake system serviced/repaired and bleeded and tested for desired operation according to manufacturer's specifications. Guard covers removed. Tools cleaned and returned to specified place.

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
6	1	Knowledge of use of workshop manual, diagram and parts catalogue		Reading and interpretation of manufacturer's specifications, workshop manual and parts catalogue.	First aid practicing and reporting.
	2	Knowledge/types and application of protective clothing.			Safety and health regulations.
	3	Knowledge/care/use of hand tools such as open ended/ring and socket spanners, screwdrivers, pliers, hammers, jack/stands, pipe cutter, flaring tools, guard cover.			Hazards involved in using hand tools.
	4	Knowledge and identification of jacking points and procedure of jack up vehicle.			Hazards involved in jacking vehicle and working under jacked vehicle.
	5	Knowledge of types/application of hydraulic pipe lines and identification of hydraulic pipe lines.			
	6	Knowledge of removing procedure of damaged/blocked pipe lines.			
	7	Knowledge of preparing procedure of new pipe lines and types and use of pipe cutting tools/flaring tools			Hazards involved in using cutting/flaring tools.
	8	Knowledge/types and refitting procedure of pipe lines and new hose.			

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
6	9	Knowledge of efects of brake fluid to vehicle paint work and fitting procedure of guard covers over front guards.			
	10	Knowledge of hydraulic fluid and bleeding procedure of hydraulic brake system.			Hazards involved in hydraulic fluid.
	11	Knowledge of filling brake fluid in necessary quantity in reservoir.	Hydraulic technology diagram.		
	12	Knowledge of jacking down procedure and removing jack/stand.			
	13	Knowledge of testing procedure of brake system.	Braking distance according to road, speed and load condition.		Hazards involved in running engine.
	14	Knowledge of removing procedure of guard covers and cleaning body.			
	15	Knowledge of cleaning and returning procedure of tools.			

TASK PERFORMANCE TEST (skill assessment)

11 TASK TITLE: SERVICING/REPAIRING HYDRAULIC BRAKE LINES L-2

TASK NO. 6

LOCATION OF TEST

CANDIDATE'S NAME

EVALUATORS' NAMES

12 TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
DID THE CANDIDATE ?		
6.1 Dress in appropriate safety clothing.		
6.2 Select appropriate hand tools.		
6.3 Jack up vehicle safely.		
6.4 Identify faulty/inefficient and damaged components of hydraulic brake pipe lines.		
6.5 Remove damaged/blocked pipe lines without damage.		
6.6 Prepare new pipe lines as per instruction without damage.		
6.7 Fit pipe lines and new hose as per instruction without damage.		
6.8 Fit guard covers over front guards to prevent damage to vehicle paint work.		
6.9 Bleed hydraulic brake system as specified.		
6.10 Fill brake fluid in the reservoir as specified level or full level.		
6.11 Jack down vehicle safely.		
6.12 Test operation of hydraulic brake system according to manufacturer's specifications.		
6.13 Remove guard covers.		
6.14 Clean and return tools to specified places.		
6.15 Complete the test within specified time.		

TASK SPECIFICATION

TASK NO. 7

SERVICING/REPAIRING PARK BRAKE

JOB TITLE: LIGHT VEHICLE BRAKE MECHANIC L-2

TASK ELEMENTS

7.1 Receives instructions verbal/written.
7.2 Dons protective clothing.
7.3 Selects appropriate hand tools.
7.4 Inspects/reports on condition of park brake.
7.5 Jacks up vehicle.
7.6 Removes rear wheels/brake drums and faulty brake cables.
7.7 Replaces new park brake cables.
7.8 Refits brake drums and rear wheels.
7.9 Adjusts foot brake and park brake.
7.10 Jacks down vehicle.
7.11 Tests park brake.
7.12 Cleans and returns tools.

TASK SPECIFICATION

TASK PERFORMANCE REQUIREMENTS

A vehicle, workshop manual, open ended/ring and socket spanners, screwdrivers, pliers, hammers, wheel nut spanner, jack/stands, new brake cables, brake adjusting tool, cleaning brush, kerosene, jute/waste rags.

7

TASK PERFORMANCE STANDARDS

Mechanic dressed in appropriate safety clothing. Appropriate hand tools selected. Faulty/inefficient and damaged components of the park brake identified. Vehicle jacked safely. Rear wheels/brake drums and faulty brake cables removed as per instrution without damage. New park brake cables replaced with cables without damage. Brake drums and rear wheels refitted as per instruction without damage. Foot brake and park brake adjusted as specified without damage. Vehicle downed safely. Serviced/repaired and adjusted park brake tested according to manufacturer's specifications. Tools cleaned and returned to specified places.

8

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
7	1	Knowledge of use of workshop manual, diagram and parts catalogue		Reading and interpretation of manufacturer's specifi-cations, workshop manual and parts catalogue.	First aid practicing and reporting.
	2	Knowledge of types and application of protective clothing.			Safety and health regulations.
	3	Knowledge/care/use of hand tools such as open ended/ring and socket spanners, screwdrivers, pliers, hammers, jack/stands, wheel nut spanner.			Hazards involved in using hand tools.
	4	Knowledge of types/application and operation of park brake and identification of park brake.			
	5	Knowledge and identificaion of jacking points and procedure of jack up vehicle.			Hazards involved in jacking vehicle and working under jacked vehicle.
	6	Knowledge of removing procedure of wheels/brake drums and faulty brake cables.			
	7	Knowledge of replacing procedure of new park brake cables.			Hazards involved in using cutting/flaring tools.
	8	Knowledge of refitting procedure of brake drums and rear wheels.			
	9	Knowledge and types of foot brake and knowledge of adjusting procedure of foot brake and park brake.			

9	10	TASK TRAINING DATA			
TASK NO.	T.E. NO.	TECHNICAL KNOWLEDGE	APPLIED CALCULATIONS	GRAPHIC INFORMATION	SAFETY & HYGIENE
6	10	Knowledge of jacking down procedure and removing procedure of jack/stands.			
	11	Knowledge of testing procedure of park brake.			
	12	Knowledge of cleaning and returning procedure of tools.			

TASK PERFORMANCE TEST (skill assessment)

	TASK TITLE: SERVICING/REPAIRING PARK BRAKE L-2	LOCATION OF TEST
11	TASK NO. 7	CANDIDATE'S NAME
		EVALUATORS' NAMES

12	TEST FACTORS AND ITEMS	STANDARD MET	STANDARD NOT MET (Comments)
	DID THE CANDIDATE ?		
	7.1 Dress in appropriate safety clothing.		
	7.2 Select appropriate hand tools.		
	7.3 Identify faulty/inefficient and damaged components of the park brake.		
	7.4 Jack up vehicle safely.		
	7.5 Remove rear wheels/brake drums and faulty brake cables as per instruction without damage.		
	7.6 Replace new park brake cables as required cables without damage.		
	7.7 Refit brake drums and rear wheels as per instruction without damage.		
	7.8 Adjust foot brake and park brake as specified or required without damage.		
	7.9 Jack down safely.		
	7.10 Test serviced/repaired and adjusted park brake according for desire operation to manufacturer's specifications.		
	6.11 Clean and return tools to specified place.		
	6.12 Complete the test within specified time.		