

Demonstrate Selecting and Using Caterpillar Service Literature

Skill Number TDP15GN109

Full Name: SAKINAH

SN/SAP ID: _____

Job Title: ~~J221~~ PM DGR.300H

Branch/Area: SIMENI SINGOSAM

PERFORMANCE TASK:

Given an Engine / Machine and service literatures. The Serviceman must be able to perform task selecting and using Caterpillar service literature.

Note: For skill assessment purpose, create the improper condition such as:

- The arrangement of the modules in the service manual does not match
- Folded sheet in service literature
- Service literature messy.

The serviceman must be able to complete the following tasks:

- Select the correct service manual related to the job
- Find out some information about specification related to the job
- Find out some information about system operation related to the job
- Find out some information about disassembly & assembly related to the job
- Find out some information about testing & adjusting related to the job
- Select the correct part manual related to the job
- Find out correct part number using the component name index page
- Find out correct component name using the part number index page
- Explain some notification on the illustration page
- Order the part using Service Part Request form
- Return the part using Service Part Return form
- Perform close the job by ensuring all systems or conditions are in the standard condition
- Perform communication & etiquette manner

Time allowed: Standard Hours (Refer to Standard Time Pricing) _____ Hours

Prerequisite	Yes	No	N/A	Hints
The Student must complete the knowledge assessment. Minimum passing grade 80%.	✓			Refer to SAP

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Preparation				
Prepare related literature	✓ D6P.			Service Manual & Parts Manual related to an actual job Service Parts Request Form Service Parts Return Form
Prepare required equipment	✓			Engine or Machine
Prepare related tools	✓			
Prepare Safety & Contamination Control equipment	✓			

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Perform etiquette/manner when starting the job				
Meet the customer.	✓			
Perform etiquette/manner when opening the interaction.	✓			<ul style="list-style-type: none"> • Perform smile & greetings. • Introduce Serviceman's identity).
Explain the purpose of Serviceman's activity.	✓			
Ask permission to perform the job.	✓			

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Selecting and using correct service manual & part manual related to the job				
Select Service Manual & Part book	✓ D6P.			Select the correct Service Manual & Parts Book for a given Machine according to the : - Sales model - Serial number - Arrangement number
Find information from service manual & parts book	✓			This should be demonstrated by looking up various service information and components as instructed.
Demonstrate understanding of explanation in the service manual and illustration in the Parts Book by answering assessor questions	✓			Such as (for sample only) : - Service Manual "What should we do to remove water pump" or

	✓			<p>"How to remove the cylinder head of the engine"</p> <p>- Part Book</p> <p>"How many clutch disc in the #3 clutch" or</p> <p>"Please point out the location of final drive bearings in parts book illustration."</p>
Documentation:				
Take picture if needed				

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Demonstrate ordering and returning the part using correct form				
Ordering part by requesting assessor	✓			Given ordering part of the selection part/group components (engine/machine)
Returning part by requesting assessor	✓			Given returning part of the selection part/group components (engine/machine)
Documentation:				
Take picture if needed				

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Perform final inspection				
Ensuring all systems or conditions are in the standard condition	✓			<ul style="list-style-type: none"> Find arrangement of the modules in the service manual is match, no folded sheet in service literature, service literature neat (for skill assessment purposes only) Communicate the finding to the customer and modules in the service manual is match, no folded sheet in service literature, service literature neat (for skill assessment purposes only) The action can be done at anytime

General Comments

- Cukup te lihi dalam membaca literatur, mudah memahami bahasa Inggris di literatur.
- perlu improve dalam pemahaman sistem dalam ~~teknik~~ engine.

RESULT:

COMPETENT

NOT YET COMPETENT (please check (√))

Serviceman:

SAKINAH

Name

29/08/2025

Date

Signature

Assessor:

Shianca Tuhub

Name

29/08/2025

Date

Signature

Supervisor:

Name

Date

Signature

Data Recorded:

Name

Date

Signature

Demonstrate Selecting and Using Caterpillar Service Literature

Skill Number TDP15GN109

Full Name: SAKINAH
Job Title: PM DGR 500H

SN/SAP ID: _____
Branch/Area: SMK N 1 SINGOSARI

PERFORMANCE TASK:

Given an Engine / Machine and service literatures. The Serviceman must be able to perform task selecting and using Caterpillar service literature.

The serviceman must be able to complete the following tasks:

- Select the correct service manual related to the job
- Find out some information about specification related to the job
- Find out some information about system operation related to the job
- Find out some information about disassembly & assembly related to the job
- Find out some information about testing & adjusting related to the job
- Select the correct part manual related to the job
- Find out correct part number using the component name index page
- Find out correct component name using the part number index page
- Explain some notification on the illustration page
- Order the part using Service Part Request form
- Return the part using Service Part Return form
- Perform close the job by ensuring all systems or conditions are in the standard condition
- Perform communication & etiquette manner

The serviceman is requested to complete the Candidate Performance Guide form.

Time allowed: Standard Hours (Refer to Standard Time Pricing) _____ Hours

Prerequisite	Yes	No	N/A	Remark
The Student must complete the knowledge assessment. Minimum passing grade 80%.	✓			

Tasks	Completed			Remark
	Yes	No	N/A	
Preparation				
Prepare related literature	✓			
Prepare required equipment	✓			
Prepare related tools	✓			
Prepare Safety & Contamination Control equipment	✓			

Tasks	Completed			Remark
	Yes	No	N/A	
Perform etiquette/manner when starting the job				
Meet the customer.	✓			
Perform etiquette/manner when opening the interaction.	✓			
Explain the purpose of Serviceman's activity.	✓			
Ask permission to perform the job.	✓			

Tasks	Completed			Remark
	Yes	No	N/A	
Selecting and using correct service manual & part manual related to the job				
Select Service Manual & Part book	✓			
Find information from service manual & parts book	✓			
Demonstrate understanding of explanation in the service manual and illustration in the Parts Book by answering assessor questions	✓			
Documentation:				
Take picture if needed				

Tasks	Completed			Remark
	Yes	No	N/A	
Demonstrate ordering and returning the part using correct form				
Ordering part by requesting assessor	✓			
Returning part by requesting assessor	✓			
Documentation:				
Take picture if needed				

Tasks	Completed			Remark
	Yes	No	N/A	
Perform final inspection				
Ensuring all systems or conditions are in the standard condition	✓			

Tasks	Completed			Remark
	Yes	No	N/A	
Reporting				
All relevant documentation completed correctly, and approved by customer (if required).	✓			

Tasks	Completed		Remark
	Yes	No	
Safety			
Using APD related to the job	✓		
Follows relevant workplace safety guidelines (tag out, safety equipment)	✓		
State and follow safety precautions	✓		
Serviceman completes job without accident due to incorrect procedure using hand tools.	✓		
Tasks completed without damage equipment and tools	✓		

Notes / Comments

- cukup teliti dalam membaca literatur, mudah memahami bahasa Inggris di literatur

- Perlu improve dalam pemahaman sistem dalam engine

Serviceman:

SAFINAH

Name

29/08/2025

Date



Signature

Assessor:

Setiawan TB

Name

29/08/2025

Date



Signature

1. Engine yang digunakan pada unit 56x adalah c9 engine.
Jelaskan :
A. ~~persyaratan~~ ^{ketentuan} saat akan melaksanakan valve lash setting. ✓
B. urutan langkah power pada engine. ✓
C. ketentuan urutan silinder engine. ✓
D. dan bila diketahui engine berputar secara counterclockwise bagaimana kita memastikannya. ✓

2. jenis fuel system pada c9 engine adalah ----- dengan
..... sebagai media aktuator ~~power~~ ^{injector} yang berasal dari ----- engine. ✓

3. Dalam sekali tahap langkah power berapa kali injector pada c9 engine menyemprotkan bahan bakar? tuliskan ^{nama} ~~nama~~ dari tahap tersebut! ✓

4. Pada engine c9 dilengkapi turbo charger yang memiliki waste gate, jelaskan fungsi waste gate, pada tekanan berapa waste gate akan membuka serta jelaskan dalam pak pica waste gate tidak bekerja pada saat tekanan yg ditentukan. ✓

5. Tuliskan spesifikasi dari 2418-5513 Temperature regulator. ✓

6. Jelaskan bagaimana kita memastikan literatur (service manual) yang kita gunakan sudah sesuai dengan unit yang sedang kita kerjakan. ✓

7. Berapakah jarak ~~power~~ gap oil piston ring terhadap piston end gap ring. ✓

8. Pada 177-9953 Charging Alternator pada putaran 5000 rpm berapakah arus minimum yang dihasilkan. ✓

1. Saat melakukan valve lash setting kita harus memeriksa valve lash terlebih dahulu, jika hasil tidak sesuai dengan tabel 9 (Chalaman 51) maka valve lash adjustment diperlukan.

urut melukukannya kita harus berdasar pada procedure & valve lash adjustment

B. Urutan langkah power : 1-5-3-6-2-4

C. Kerenangan urutan cylinder engine :

Arrangement : inline 6x cylinder (NO.1 barisan depan)



D. Kita memushkan perangnya dengan melihat ujung Flywheel engine

2. jenis fuel system pada LG engine adalah HEUI dengan oil sebagai media
dewabr injektor yang berasal dari engine lubrication oil

3. - prior injeksi
- ~~injeksi~~ ~~detak~~ 2x sempit
- main injeksi

4. T_c yg wastegate berfungsi untuk mengatur & meningkatkan tekanan dorong
tekanan terbuka : 0-50 mm H₂O
dalam : aliran terjadi ketika seimbang tekanan dan tidak maksimal
dalam : $10,4 \text{ mm CO}_2 \text{ (inch)}$

5. 840-5513 : ~~min~~ ~~opening~~ ~~diameter~~ 10,4 mm CO₂ (inch)
jarak min suhu terbuka penuh
Suhu pembuktan 81-84°C (178-185°F)

Suhu maksimum 92°C (198°F)
Suhu maksimum saat & suhu $165 \pm 9 \text{ N}$ pada 207 lbs
kebobocoran tidak boleh lebih min 10.0 cc (0.16 inch) pada 207 lbs
kebobocoran tidak boleh lebih min 165 ± 9 N (57 ± 2 lb) (causps.)

Gaya memisahkan valve dr seat adalah 165 ± 9 N (57 ± 2 lb)

6. dengan melihat SU pada unit dan memgirkan fede di servicer manual

7. U₁ 15 ± 0,15 mm (0,018 ± 0,006 inch)

8 - 85 AMP

9. kebocoran piston rings & aus valve guide & seat
mempulsaikan kebocoran di crankcase breather & mengontrol ring & piston
NS alk

10. ~~inlet & exhaust~~ values untuk NO₁

11. 1213 kg (2675 lb)

12. 1. check air inlet & exhaust system
2. check calibraton dr engine speed / km/h sensor

3. Atmospheric pressure sensor
↳ remove & install sensor

4. boost pressure sensor "fuel position" and for "FCR fuel"

5. Fuel filter

6. fuel quality

7. valve adjustment

12-

13. 6 macam maju 3
1 2 3
2 5 23

mundur 3
1 2 3
24 23 13

14. 1 & 4

SERVICE PARTS REQUISITION 4.3

WORK ORDER NO. 29825	A/C NO.	CUSTOMER SMK N 01 Singosari	MODEL DGR	SERIAL NO S6T1	1 WARRANTY
SEGMENT NO.					2 UNIT DOWN
					3 SCHEDULED

DELIVER TO SMK N 01 Singosari	DATE/TIME OF DELIVERY 29/10	CATERPILLAR PART ? <input checked="" type="checkbox"/> YES NO.	INITIAL SUPPLY PSO REF. NO.
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CUSTOMER REPRESENTATIVE NAME	CUSTOMER REPRESENTATION SIGNATURE	TOTAL PARTS ESTIMATE
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PREPARED BY SAKINAH	APPROVED BY BETAWAN TUMU	DATE/TIME APPROVED
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ITEM	PART NUMBER	CHANGED TO	DESCRIPTION	QTY		APPROVAL	UNIT PRICE	EXTENDED PRICE	RECORD
				ESTI MATED	ACTUAL				
1	1R-0750	-	Filter - fuel	1	1	0			
2	1W-5686		Filter OP primary fuel	1	1	0			
3	7X-7700		CAP AS-fuel	1	1	X			
4	9P-7121		Strainer - fuel	1	1	X			
5	4T-6788		Filter - oil	1	1	0			
6	6V-5849		Blade AS-wiper	2	2	X			
7	283-1709		engine oil	2	2	0			
8									
9									
10									
11									
12									
13									
14									
15									
16									
17									
18									
19									
20									
21									
22									
23									
24									
25									
26									
27									

* APPROVAL CODES
 C - CUSTOMER REQUEST
 I - FOUND BY INSPECTOR
 R - FOUND DURING REPAIR

0 - APPROVED BY CUSTOMER
 X - NOT APPROVED BY CUSTOMER

TOTAL C/F

SERVICE PARTS RETURN 4.5

Work Order No. **29825** Customer **SMKN 1 Singosari**

Seg. No.

Returned By: **SAKINAH** Caterpillar Parts Yes No Date **29/08/2025**

Received By:

Item	Part No.	Qty	Issue	Unit Price	Ext. Price	Reason	NS?	Remarks
			PSO No.	Rp.	Rp.			
1	7x-7700	1				3		
2	gp-7121	1				3		
3	6V-5049	2				3		
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								
17								
18								
19								
20								

PARTS RETURN REASONS:

1. Service Dept. Order Unnecessary Parts
2. Service Order Wrong Parts
3. Customer Cancell, Old Parts Use
4. Wrong Indo From Customer
5. Parts Double Ordered By Service
6. Parts Double Supplied By Parts Dept
7. Parts Wrong Supplied By Parts Dept
8. Parts Exchange Core
9. Transfer Between Job
10. PPE - Order

APPROVED BY :

1. SERVICE MANAGER
2. BRANCH MANAGER
3. PARTS DEPT. MANAGER
(required for NS items
> RP 750.000 per l/item)

ANALISIS KESELAMATAN KERJA / JOB SAFETY ANALYSIS

Pekerjaan / Task	PM 500 Hours 3 MONTHS D6R	Nomor JSA / JSA Number	1	Halaman Page	1	dari of	1
Tgl Pembuatan JSA Date of JSA	29 AGUSTUS 2025	Departemen / Department	SERVICE	Tempat Kerja / Work Location	WORKSHOP TAB		
Disusun oleh / Compiled By	SAKINAH	TTD / Sign		Review oleh / Reviewed by	TTD / Sign	Atasan / Superior	TTD / Sign

Apakah anda terlatih untuk melakukan pekerjaan ini? / Are you properly trained to complete this task Ya Tidak/ No

Apa yang anda perlukan untuk memastikan bahwa pekerjaan selesai tanpa adanya kecelakaan kerja? / What do you need to ensure this job is completed without incident
Menjaga dan selalu berkomunikasi dengan baik, perencanaan pekerjaan mengacu pada service manual caterpillar.

Siapa yang bertanggung jawab untuk menghentikan pekerjaan jika terjadi perubahan pekerjaan atau gangguan kondisi lingkungan kerja? / Who is responsible for Stop Work authority if change job or workplace distraction
Siapa saja yang melihat jika ada potensi bahaya.

Apakah anda memerlukan peralatan LOTO? / Are you need LOTO equipments? Ya Tidak/ No

Kondisi Lingkungan/ Environmental Condition	TENANG	Cuaca/ Weather	MENDUNG	Medan/ Terrain	RATA
Pengendalian Sumber Bahaya/ Hazardous Energy Control	<input type="checkbox"/> Listrik/ Electric <input type="checkbox"/> Hidrolik/ Hydraulic	<input checked="" type="checkbox"/> Gravitasi (benda jatuh, tertimpa) <input checked="" type="checkbox"/> Mekanis/ Mechanical	<input type="checkbox"/> Pneumatik/ Pneumatic <input type="checkbox"/> Panas/ Thermal		
APD yang diperlukan/ Required PPE	<input checked="" type="checkbox"/> Helm/ Safety Helmet <input checked="" type="checkbox"/> Sepatu/ Safety Shoes <input checked="" type="checkbox"/> Kacamata/ Safety Glasses	<input checked="" type="checkbox"/> Sarung Tangan/ Hand Gloves <input type="checkbox"/> Pelindung Telinga/ Hearing Protection <input type="checkbox"/> Pelindung Pernafasan/ Respiratory Protection	<input type="checkbox"/> Pelindung Muka/ Face Shield <input type="checkbox"/> Pelindung Jatuh/ Fall Protection <input type="checkbox"/> Lain-Lain/ Others		

Hal yang perlu dipertimbangkan dalam mengidentifikasi bahaya/ These to consider in identify hazards

1. Bahaya Kimia : Tertelan, terkena kulit, terhirup, terserap
 Chemical Hazard : Ingestion, skin contact, inhalation, absorption

2. Bahaya Biologi : Patogen yang ditularkan melalui darah, lalat, tanaman, serangga, hewan

3. Bahaya Fisik : Listrik, Api, Ledakan, Kebisingan, Radiasi, Panas, Stress, Terjepit, Tersandung, Terjatuh, Tertimpa, Getaran
 Physical Hazard : Electric, Fire, Explosion, Noise, Radiation, Thermal, Stress, Pinch, Slipp, Falls, Struck by, Vibration

4. Bahaya Ergonomi : Gerakan berulang, Beban berlebih, Postur Janggal, Durasi Kerja, Desain area kerja
 Ergonomic Hazard : Repetition, Forcefull extention, awkward posture, duration, work area design

NO	Urutan Dasar Langkah Tugas / Job Step (Maksimum 15 Langkah / Maximum 15 Steps)	Bahaya Yang Terkait / Potential Hazard	Tindakan Pengendalian/ Recommended Action
1.	WALK AROUND INSPECTION	1.1 TERSANDUNG BATU	1.1. BERSIHKAN AREA KERJA
2.	PREPARE TOOLS	2.1 TANGAN TERGEUNCI	2.1. GUNAKAN SAFETY GLOVES
3.	CLEAN CRANKCASE BREATHER	3.1 TERJEPIT PART	3.1. PERHATIKAN PENEMPATAN TANGAN
4.	CHANGE OIL AND FILTER ENGINE	4.1 TERPELESET LANTAI LICIN	4.1. GUNAKAN SAFETY SHOES
5.	REPLACE SECONDARY FUEL FILTER	5.1 MENGHIRUP UAP FUEL	5.1. GUNAKAN SAFETY MASK
6.	REPLACE WATER SEPARATOR ELEMENT	6.1 IRTIASI MATA	6.1. GUNAKAN SAFETY GLASSES
7.	CLEAN TANK CAP FILTER & STRAINER	7.1 TERBESRES BAGIAN TAJAM	7.1. PERHATIKAN PELATKAN TANGAN
8.	REPLACE HYDRAULIC OIL SYSTEM	8.1 TERBELUNCI TUMPAHAN OIL	8.1. GUNAKAN SAFETY SHOES
9.	CHECK OIL LEVEL	9.1 BAHU KESLEO	9.1. PERHATIKAN POSISI TUBUH
10.	CLEAN TRANSMISSION BREATHER	10.1 TERBESRES DI AREA SEMPIT	10.1. GUNAKAN APD LENGKAP
11.	INSPECT WINDOW WIPERS	11.1 TERJATUH	11.1. GUNAKAN SAFETY HARNESS
12.	HOUSE KEEPING	12.1 TERSANDUNG KOMPONEN	12.1. RAKITKAN KOMPONEN



SERVICE REPORT

ROUTING

1

DEALER CODE J221	WORK ORDER 29825	SEG	CUSTOMER NAME SMKN 01 SINGOSARI
DATE 08 / 29 / 25 mo / da / yr	EMPLOYEE IDENTIFICATION SAKINAH	EQUIPMENT LOCATION SMKN 01 SINGOSARI	
CATERPILLAR MODEL D6R	CATERPILLAR SERIAL NO. 6T00268	INSTRUCTION PM 500H 3M D6R	
HOURS	MILES	KILOMETERS	

PART NUMBER RESPONSIBLE	PART NAME	QTY	DESC* CODE	GROUP NUMBER CONTAINING PART	GROUP NAME	DID THIS INCIDENT MAKE THE PRODUCT INOPERABLE?		DESCRIPTIVE COMMENTS (20 SPACES MAXIMUM PER INCIDENT)
1R-0750	Fuel Filter	1	7525	2W-3282	Filter Secondary	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
283-1709	engine oil	2	7525	2W-3282	Secondary fuel	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
						<input type="checkbox"/> Yes	<input type="checkbox"/> No	

DESCRIPTION CODES * A - Structural C - Leaks E - System Malfunction G - General Repair K - Serviceability X - OPERATION COMPLAINT
 B - Surface D - Factory Assembly F - Factory Shipping H - Adjustment N - Abuse

RELATED SERIAL NUMBERS		COMPONENT ARRANGEMENT / TEST / SERIAL NUMBERS		LABOR CODE	DESCRIPTION	MAN HOURS
CATERPILLAR MODEL	OEM PRODUCT SERIAL NO.	MAKE / MODEL	NUMBER			
		VEHICLE CONFIGURATION				
		DELIVERY DATE		DATE OF LAST LABOR		

WHAT WAS THE CUSTOMER COMPLAINT
 PM 500 hours 3 months D6R

ADDITIONAL COMMENT ON THE CAUSE OF FAILURE ?
 -

WHAT WAS THE RESULTANT DAMAGED ?
 -

HOW DID YOU REPAIR IT ?
 -

CUSTOMER SIGNATURE _____ SERVICEMAN SIGNATURE _____

IF COPY OF THIS PAGE IS BEING SENT TO CATERPILLAR, COMPLETE FOLLOWING DEALER STORE == Sis ==