Demonstrate Selecting, Using and Maintaining a range of Precision and Non-Precision Tools to Accurately Measure

Skill Number CO-OP15GN105

Full Name: Dinas Surya Hadi W. **No ID:** 23747/028.018

Validation Date: 6/12/2025 **School:** SMKN 1 Singosari

PERFORMANCE TASK:

Given some measuring tools, the student is requested to perform the following tasks on various measuring tools:

- Selecting
- Using
- Recording
- Maintaining

The student will be instructed to measure with a non-precision gauge such as: steel ruler, feeler gauge and precision tools such as vernier calipers, outside, inside and depth micrometer the dimension of some given parts. Literature and measuring tools will be made available but will not be provided directly to the student.

The student must be able to perform the following task:

- Demonstrate using various measuring tools on an engine or other system components.

Safety and Contamination Control must be always applied to this process.

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

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Preparation				
Prepare related literature	✓			
Prepare required equipment	✓			
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 / assessor	✓			
Perform etiquette/manner when opening the interaction.	✓			
Explain the purpose of Student's activity.	✓			
Ask permission to perform the job.	✓			

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Selecting, Using and Maintaining a range of Precision and Non-Precision Tools				
1. Inspect the measuring tool before using	✓			
2. Clean tool and component	✓			
3. Calibrate measuring tools before using	✓			
4. Measure component use measuring tools with tolerance allowance 0.5 mm (0.02" or 1/25") for non-precession measuring tools and 0.025 mm (0.001") for precision measuring tools.	✓			
5. Tasks completed without damage to equipment and tools	✓			
6. Equipment and tooling are cleaned and returned to its correct location	✓			
7. Record the reading of the measurements	✓			
Documentation:				
Take picture if needed	✓			

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Perform close the job by ensuring all systems or conditions is in the standard condition				
Ensure all systems or conditions are in standard condition.	✓			

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

Tasks	Completed		Observation / Hints
	Yes	No	
Safety			
Using PPE related to the job	✓		
Follows relevant Workplace Safety Guidelines (LOTO, 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	✓		

Tasks	Completed		Observation / Hints
	Yes	No	
Contamination Control			
Environmental Practices & Housekeeping	✓		

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Perform etiquette/manner after completing the job				
Perform etiquette/manner when closing the communication.	✓			

General Comments

RESULT: **COMPETENT** ☐ **NOT YET COMPETENT** ☐ (please check (√))

Student:	Dimas Surya H.W Name	16/12/2025 Date	 Signature
Assessor:	 Name	22/12/2025 Date	 Signature
Supervisor:	Name	Date	Signature
Data Recorded:	Name	Date	Signature

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Perform etiquette/manner when starting the job				
Meet the customer / assessor	✓			
Perform etiquette/manner when opening the interaction.	✓			• Perform smile & greetings. • Introduce Student's identity
Explain the purpose of Student's activity.	✓			
Ask permission to perform the job.	✓			

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Selecting, Using and Maintaining a range of Precision and Non-Precision Tools				
1. Inspect the measuring tool before using	✓			Visual inspection of the measuring tool for wear, cracks, damage
2. Clean tool and component	✓			Using of consumables CC tools
3. Calibrate measuring tools before using	✓			Tools should be calibrated as given procedure
4. Measure component use measuring tools with tolerance allowance 0.5 mm (0.02" or 1/25") for non-precession measuring tools and 0.025 mm (0.001") for precision measuring tools.	✓			Thread identification gauge and tire pressure gauge without tolerance
5. Tasks completed without damage to equipment and tools	✓			Component and tooling are cleaned and assembled as given procedure
6. Equipment and tooling are cleaned and returned to its correct location	✓			Cleaned and stored equipment tools on the right place.
7. Record the reading of the measurements	✓			Write the actual reading on the paper given by the assessor
Documentation:	✓			
Take picture if needed				

Demonstrate Selecting, Using and Maintaining a range of Precisio Non-Precision Tools to Accurately Measure

Skill Number CO-OP15GN105

Full Name: Dimas Surya H.W **No ID:** _____

Validation Date: 16/12/2025 **School:** SMKN 1 Singos

PERFORMANCE TASK:

Given some measuring tools, the student is requested to perform the following tasks on various measuring

- Selecting
- Using
- Recording
- Maintaining

The student will be instructed to measure with a non-precision gauge such as: steel ruler, feeler gauge a tools such as vernier calipers, outside, inside and depth micrometer the dimension of some given parts. Li measuring tools will be made available but will not be provided directly to the student.

The student must be able to perform the following task:

- Demonstrate using various measuring tools on an engine or other system components.

Safety and Contamination Control must be always applied to this process.

Prerequisite	Yes	No	N/A	Hint
The student must complete the knowledge assessment. Minimum passing grade 80%.				Score measu Course or su

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

Tasks	Completed		Observation / Hints
	Yes	No	
Contamination Control			
Environmental Practices & Housekeeping	✓		1. Waste is minimized, waste material, including sludge; solids and other wastes are sorted and stored in bins for recycling or disposal 2. Packaging of goods received is sorted and reused or disposed of by recycling 3. Materials that can be reused are cleaned and stored 4. Waste and scrap are removed following workplace procedures 5. All fluids are disposed of in accordance with enterprise policies and procedures

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Perform etiquette/manner after completing the job				
Perform etiquette/manner when closing the communication.	✓			• Perform smile & greetings. • Ask permission to leave or end the interaction.

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Perform close the job by ensuring all systems or conditions is in the standard condition				
Ensure all systems or conditions are in standard condition.	✓			• Find the improper condition. • Communicate the finding to t customer/assessor.

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Reporting				
All relevant documentation completed correctly and approved by customer (if required).	✓			• Completing the Task List • Completing Measurement Fo Check Sheet, if required • Create Service Report (SIMS required • Create SPR, if required • Documenting the failed or da parts, if required • Provide Technical Analysis Report/Failure Analysis Repo required.

Tasks	Completed		Observation / Hints
	Yes	No	
Safety			
Using PPE related to the job	✓		
Follows relevant Workplace Safety Guidelines (LOTO, Safety Equipment)	✓		Comply with safety regulation th on the workplace
State and follow Safety Precautions	✓		• Create Job Safety Analysis • Student must follow safety proc to service manual or SIS relatec
Serviceman completes job without accident due to incorrect procedure using hand tools.	✓		• Correct working position • Correct hand tool related to t
Tasks completed without damage equipment and tools	✓		

General Comments

RESULT: **COMPETENT** ☐ **NOT YET COMPETENT** ☐ (please check (√

Student:	Dimas Surya H.W Name	16/12/2025 Date	 Signature
Assessor:	Setiawan JB Name	22/12/2025 Date	 Signature
Supervisor:	Name	Date	Signature
Data Recorded:	Name	Date	Signature

01/06/1972 Oil Pump (REG01172)

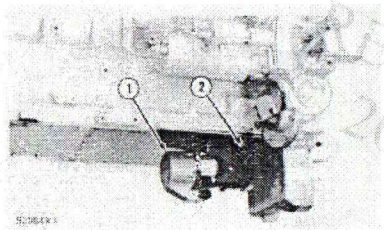
SMCS - 1304

Remove Oil Pump

start by:

a) remove engine

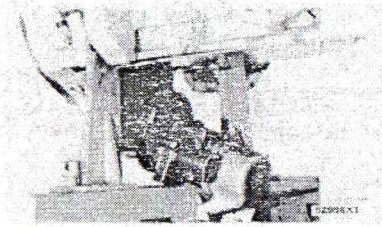
b) remove oil pan



1. Remove the oil pump mounting bolts (2) and locks.

2. Remove the oil pump (1). Weight 55 lbs. (25 kg).

Install Oil Pump



1. Put the oil pump on the engine.

2. Install the oil pump mounting bolts and locks.

end by:

a) install oil pan

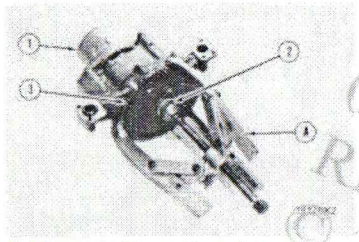
b) install engine

Disassemble Oil Pump

Tools Needed		A
1P2322	Puller (8H705)	1
887560	Step Plate	1

start by:

a) remove oil pump



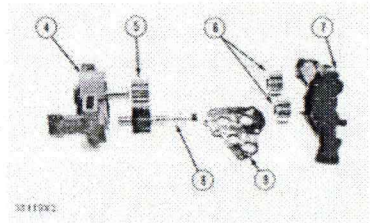
1. Remove the cotter pin and loosen gear retaining nut (2). Using tool setup (A), the oil pump drive gear (3) from shaft. Remove tool setup (A), nut, washer and g Remove the woodruff key from shaft.

2. Remove the suction bell (1). Remove the oil pump bypass valve cover and spa

NOTICE

Loosen the cover mounting bolts slowly until spring tension is relieved.

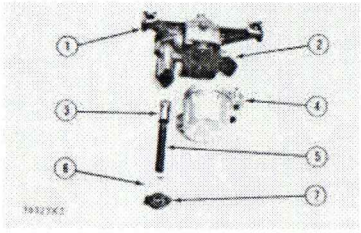
3. Remove the bypass valve spring and plunger.



4. Remove the pump housing mounting bolts and separate housings (4) and (7). two oil pump gears (6) and woodruff key from the oil pump shafts. Remove spac (9), shaft (8) and gear (5).

Assemble Oil Pump

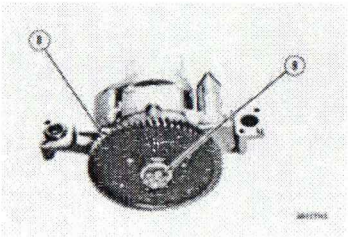
1. Put SAE 30 engine oil on the shafts and gears. Install the oil pump shaft and gear. Install the spacer plate.



2. Install the woodruff key in the shaft and place both gears on the shafts. Connect housings (1) and (2). Install the pump housing bolts.

NOTE: The oil pump gears must turn freely after the housing bolts have been tightened.

3. Put lubricant on bypass valve plunger (3), spring (5), spacer (6) and cover (7). Install the suction bell assembly (4).



4. Install the woodruff key and oil pump drive gear (8). Install the gear retaining nut (9). Tighten the retaining nut to 100 lb.ft. (13,8 mkg) plus amount needed to install cotter pin.

end by:

a) install oil pump

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Trakindo CAT

Nomor Formulir / *Form Number*	SHE.SHE.FRM.005.R04

ANALISIS LINGKUNGAN KESELAMATAN KERJA / *JOB SAFETY ENVIRONMENT ANALYSIS*

Pekerjaan / *Task*	DA Oil Engine Pump	Nomor JSEA / *JSEA Number*		Halaman / *Page*		Dari / *Of*	

Tanggal Pembuatan JSEA / *Date of JSEA*	16/12/2025	Departemen / *Dept*	TAB	Tempat Kerja / *Work Location*	Workshop Teknik Alat Berat

Disusun Oleh / *Compiled By*	Surya	TTD / Sign		Review Oleh / *Reviewed By*		TTD / *Sign*		Atasan / *Superior*		TTD / *Sign*	

Apakah Anda sudah terlatih untuk melakukan pekerjaan ini ? / *Are you properly trained to complete these task ?* ☐ Ya / *Yes* ☐ 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 incident free ?*

Tools yang digunakan sudah sesuai dengan Manual

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 could ?*

ABCD-1 (Technician Leader) / Mr. X (Customer)

Apakah Anda memerlukan peralatan LOTO ? / *Are you need LOTO Equipments ?* ☐ Ya / *Yes* ☐ Tidak / *No*

Apakah Anda mengetahui ERP/MERP dari pekerjaan yang sedang dilakukan? ☐ Ya / *Yes* ☐ Tidak / *No* ***Jika tidak, silahkan tambahkan dalam urutan langkah tugas diawal***

Kondisi Lingkungan / *Environmental Conditions*	Cuaca / *Weather*		Medan / *Terrain*	

Pengendalian Sumber Bahaya / *Hazardous Energy Control*					
	☐ Listrik / *Electrical*	☑ Gravitasi (Benda jatuh,tertimpa) / *Gravitation (Falling objects, struck down)*	☐ Pneumatik / *Pneumatic*
	☐ Hidraulik / *Hydraulic*	☑ Mekanis / *Mechanical*	☐ Panas / *Thermal*

APD yang diperlukan / *Required PPE*					
	☑ Helm / *Safety Helm*	☐ Pelindung Muka / *Face shield*	☑ Kacamata / *Safety Glass*
	☑ Sarung Tangan / *Hand Gloves*	☐ Pelindung Pernafasan / *Respiratory Protection*	☐ Perlindungan Kejatuhan / *Fall Protection*
	☑ Sepatu / *Safety Shoes*	☐ Pelindung Telinga / *Hearing Protection*	☐ Lain-Lain / *Other .....*

Hal yang perlu dipertimbangan dalam mengidentifikasi bahaya / *These to consider in identify hazards* :

1. **Bahaya Keselamatan** : Kondisi tidak aman yang dapat menyebabkan injury atau kematian seperti terjepit, terpeleset/terjatuh, tertimpa dll.
   Safety Hazard : unsafe conditions that can cause injury or even death, such as spill/falls, pinch point, struck by, etc.
2. **Bahaya Fisik** : Listrik, Api/ledakan, Kebisingan, Radiasi, Panas, Tekanan, Terjepit, Tersandung/Terjatuh, Tertimpa, Getaran.
   Physical Hazards : Electrical, Fire/Explosion, Noise, Radiations, Thermal, Pressure, Pinch Point, Slips/Falls, Struck by, Vibration.
3. **Bahaya Kimia** : Terhirup, terkena kulit, injeksi, tertelan, terserap.
   Chemical Hazards : Inhalation, skin contact, injection, ingestion, absorption.
4. **Bahaya Biologi** : Patogen yang ditularkan melalui darah, jamur, tanaman/serangga/hewan.
   Biological Hazards : bloodbone pathogens, mold, Plant/Insect/Animals
5. **Bahaya Ergonomi** : Gerakan berulang-ulang, beban yang berlebihan, Postur Janggal, Durasi kerja, Desain area kerja.
   Ergonomic Hazards : Repetitions, Forcefull extention, Awkward Posture, Duration , Work area design.
6. **Bahaya Organisasi** : stres atau bahaya terkait dengan masalah tempat kerja yang menyebabkan efek jangka panjang atau pendek, beban kerja yang berat dan kekerasan ditempat kerja.
   Organizational hazards: stressors or hazards associated with workplace issues that cause long or short term effects heavy workloads, stressful interactions and workplaces violence.

No	Urutan Dasar Langkah Tugas / *Job Steps* (* Maksimum 15 Langkah / *Maximum 15 Steps*)	Bahaya Yang Terkait / *Potential Hazard(s)*	Tindakan Perbaikan / *Recommended Action*
1.	Prepare Alat Pelindung diri	Ergonomi	1.1 Nyamankan posisi sebelum prepare apd
			1.2 Perhatikan posisi tubuh
			1.3 Lakukan pekerjaan sesuai SOP
2.	Walk Around Inspection	Tempat yang ramai	1.1 Pasang safety line diarea kerja
		Terjatuh karena fluida bercecer	2.1 Bersihkan fluida dengan Majun
			2.2 Gunakan APD lengkap
3.	Prepare tool and parts	Tertimpa oil engine pump	1.1 Angkat dengan posisi yang benar
			1.2 Fokus saat bekerja
			1.3 Angkat dengan 2 orang
		Ergonomi	2.1 Nyamankan posisi sebelum mengangkat
			2.2 Perhatikan posisi tubuh
			2.3 Lakukan pekerjaan sesuai SOP
		Tool kotor	3.1 Bersihkan tool dengan Majun
		Terlindas Tool box	4.1 Dorong tool box jangan ditarik
4.	Doing Disassemble oil engine pump	Terjepit gear	1.1 Hindari titik jepit
			1.2 Fokus saat bekerja
		Tool terpental dari tangan	2.1 Pegang tool dg erat
		Tertimpa tool saat mengambil	3.1 Fokus saat bekerja

Trakindo CAT

Nomor Formulir / Form Number	SHE.SHE.FRM.005.R03

ANALISIS LINGKUNGAN KESELAMATAN KERJA / JOB SAFETY ENVIRONMENT ANALYSIS

Pekerjaan / Task	DA oil engine pump	Nomor JSEA / JSEA Number		Halaman / Page	2	Dari / Of	2

No	Urutan Dasar Langkah Tugas / *Job Steps*	Bahaya Yang Terkait / *Potential Hazard(s)*	Tindakan Perbaikan / *Recommended Action*
5.	Cleaning the komponent	Tertimpa komponen	1.1 Fokus saat bekerja
			1.2 Angkat dengan benar
		Terciprat solar saat membersihkan	2.1 Pelan-pelan saat membersihkan
			2.2 Fokus saat bekerja
		Terpeleset solar berceceran	3.1 Bersihkan solar dengan majun
6.	Measure the component	Terjepit alat ukur	1.1 Gunakan alat ukur dengan baik
		Tertusuk alat ukur	2.1 Fokus saat mengukur
			2.2 Pastikan menggunakan dg benar
7.	Doing Assembly oil engine pump	Terjepit gear	1.1 Hindari titik jepit
			1.2 Fokus saat bekerja
		Tool terpental dari tangan	2.1 Pegang tool dengan erat
		Tertimpa tool saat mengambil	3.1 Fokus saat bekerja
8.	Housekeeping	Solar berceceran	1.1 Bersihkan solar dengan majun
		Debu masuk saat menyapu	2.1 Pakai Masker

Bukti sosialisasi / *Evidence of socialization* :

No	Nama / *Name*	TTD / *Sign*
1		
2		
3		
4		
5		

No	Nama / Name	TTD / Sign

No	Nama / Name	TTD / Sign

Bagian Dari / *Part Of*	SHE.SHE.SOP.003.R04