

Demonstrate Inspecting and Servicing Various Bearing, Seal and Gasket Used in Heavy Equipment

Skill Number CO-OP15GN106

Full Name: Yuda Adli P. No ID: _____
 Validation Date: 30/10/2018 School: _____

PERFORMANCE TASK:

Given assorted bearings, seals and gaskets, the student is requested to perform the following tasks on the components:

- Removing
- Inspection
- Installing

The student must be able to perform the following task:

- Demonstrate removing, inspection and installing Bearing, Seals and Gasket.

It is recommended that assessor put questions to student regarding the findings of their inspections and subsequent report. Literature and measuring tools will be made available but will not be provided directly to the student.

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

Prerequisite	Completed			Hints
	Yes	No	N/A	
The student must complete the knowledge assessment. Minimum passing grade 80%.	✓			Score seal, bearing, gasket course or subject.
Preparation				
Prepare related literature	✓			Observe if the candidate is referring to the Manufacturer's Literature
Prepare required equipment	✓			Observe if the candidate is preparing bearings, seals, and gaskets
Prepare related tools	✓			Observe if the candidate is preparing related tools (e.g.: Hand tools, bearing puller, Bearing heater, Infrared Thermometer, etc.)
Prepare Safety & Contamination Control equipment	✓			Observe if the candidate is preparing related Safety & CC Equipment (e.g.: PPE, Blue Towel, Plastic Wrap, etc.)

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	
Remove, Inspect and Install Bearings, Seals and Gaskets				
1. Accessing Information	✓			Observe if the candidate is accessing information relating task from manufacturer's literature
2. Bearing Seals & Gasket Removal	✓			Observe if the candidate is removing bearings, seals and gasket following instruction on manufacturer's literature
3. Determine bearing reusability of bearings, seals, and gasket	✓			Observe if the candidate is inspecting bearings, seals and gasket following instruction on manufacturer's literature
4. Bearing Seals & Gasket Installation	✓			Observe if the candidate is installing bearings, seals and gasket following instruction on manufacturer's literature
5. Equipment and tooling are used in the correct way	✓			
6. Equipment and tooling are cleaned and returned to its correct location	✓			
Documentation:				
Take picture if needed				



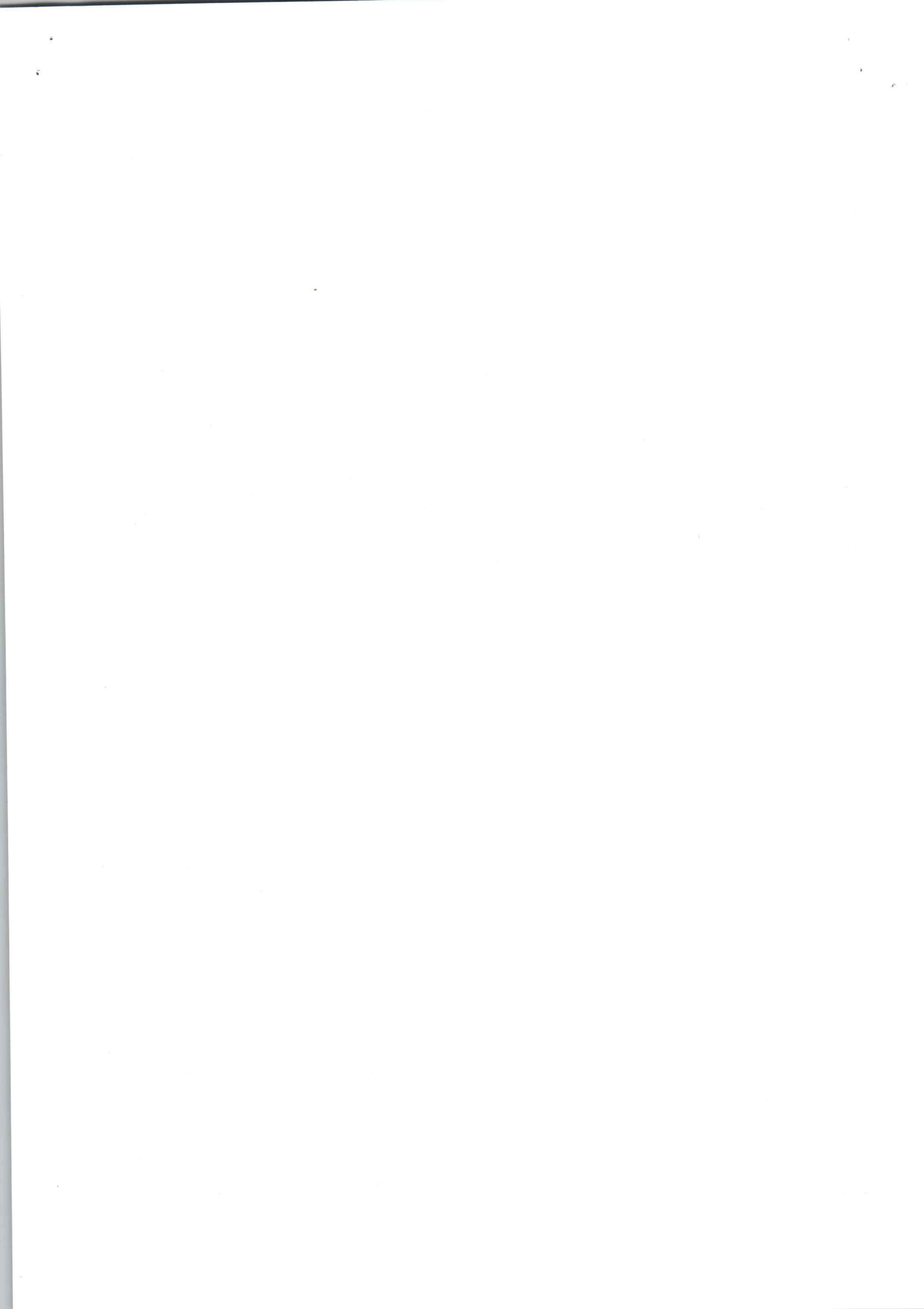
Tasks	Completed		Observation / Hints
	Yes	No	
Perform close the job by ensuring all systems or conditions is in the standard condition			
Ensure all systems or conditions are in standard condition.	✓		<ul style="list-style-type: none"> Find the improper condition. Communicate the finding to the customer/assessor.

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
Reporting				
All relevant documentation completed correctly and approved by customer (if required).	✓			<ul style="list-style-type: none"> Completing the Task List Completing Measurement Form/Related Check Sheet, if required Create Service Report (SIMS), if required Create SPR, if required Documenting the failed or damaged parts, if required Provide Technical Analysis Report/Failure Analysis Report, if required.

Tasks	Completed		Observation / Hints
	Yes	No	
Safety			
Using APD related to the job	✓		
Follows relevant Workplace Safety Guidelines (LOTO, Safety Equipment)	✓		<ul style="list-style-type: none"> Comply with safety regulation that applied on the workplace
State and follow Safety Precautions	✓		<ul style="list-style-type: none"> Create Job Safety Analysis Student must follow safety procedure refer to service manual or SIS related to job
Service man completes job without accident due to incorrect procedure using hand tools.	✓		<ul style="list-style-type: none"> Correct working position Correct hand tool related to the job
Tasks completed without damage equipment and tools	✓		

Tasks	Completed		Observation / Hints
	Yes	No	
Contamination Control			
Environmental Practices & Housekeeping	✓		<ol style="list-style-type: none"> Waste is minimized, waste material, including sludge, solids and other wastes are sorted and stored in bins for recycling or disposal Packaging of goods received is sorted and reused or disposed of by recycling Materials that can be reused are cleaned and stored Waste and scrap are removed following workplace procedures 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.				<ul style="list-style-type: none"> Perform smile & greetings. Ask permission to leave or end the interaction.



General Comments

*Peleayi kumburli be riq.
pre cood.*

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

Student: _____
Name _____ Date _____ Signature _____

Assessor: *Shirana TB*
Name *Shirana TB* Date *11/11/2016* Signature *[Signature]*

Supervisor: _____
Name _____ Date _____ Signature _____

Data Recorded: _____
Name _____ Date _____ Signature _____



Demonstrate Inspecting and Servicing Various Bearing, Seal and Gasket Used in Heavy Equipment

Skill Number CO-OP15GN106

Full Name: Yuda Adi Pratama

No ID: _____

Validation Date: 30 Oktober 2021

School: SMKN 1 Singaperi

PERFORMANCE TASK:

Given assorted bearings, seals and gaskets, the student is requested to perform the following tasks on the components:

- Removing
- Inspection
- Installing

The student must be able to perform the following task:

- Demonstrate removing, inspection and installing Bearing, Seals and Gasket.

It is recommended that assessor put questions to student regarding the findings of their inspections and subsequent report. Literature and measuring tools will be made available but will not be provided directly to the student. Safety and Contamination Control must be always applied to this process.

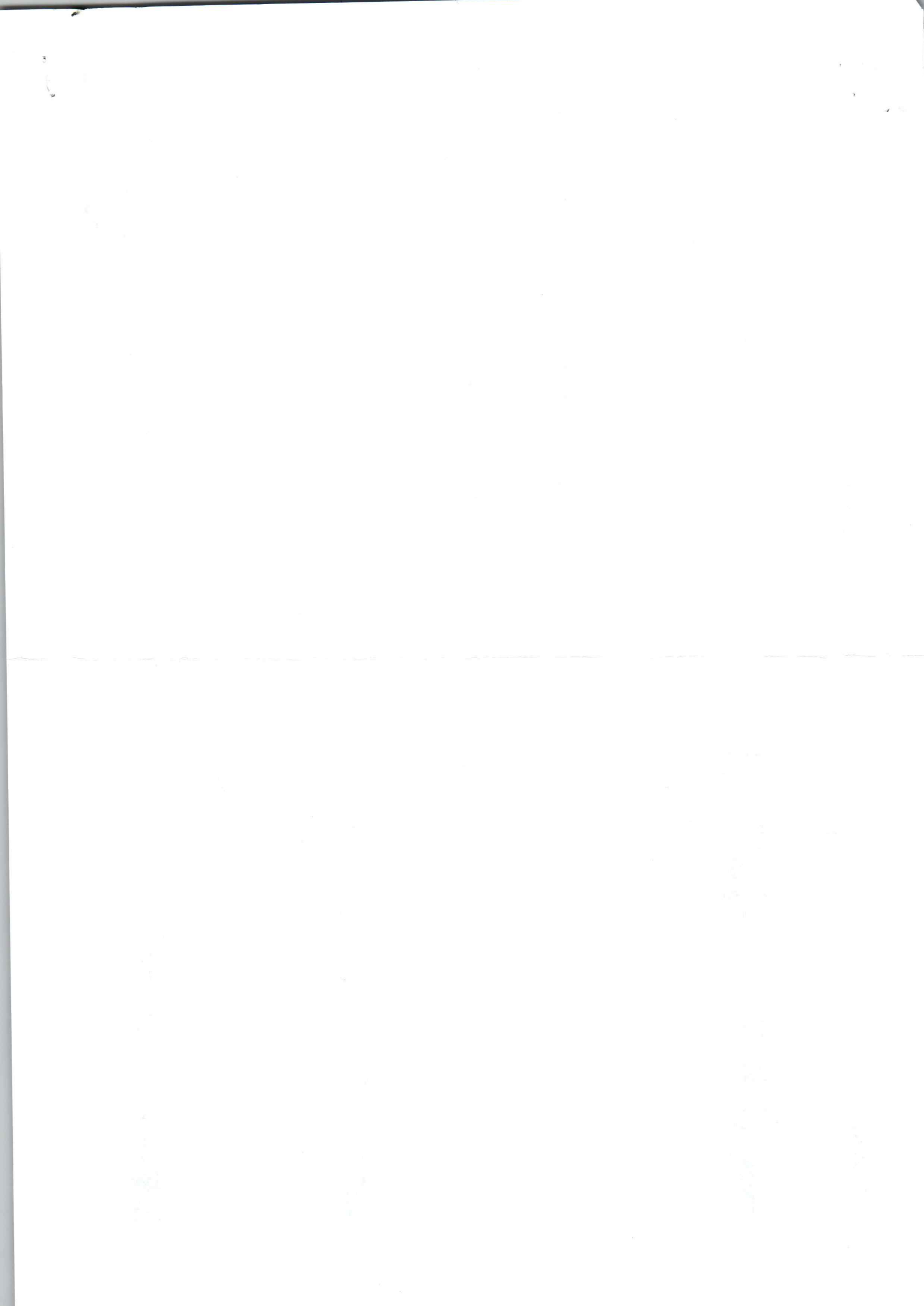
Prerequisite	Yes	No	N/A	Hints
The student must complete the knowledge assessment. Minimum passing grade 80%.	✓			

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	
Remove, inspect and install Bearings, Seals and Gaskets				
1. Accessing Information	✓			
2. Bearing, Seals & Gasket Removal	✓			
3. Determine bearing reusability of bearings, seals, and gasket	✓			
4. Bearing, Seals & Gasket Installation	✓			
5. Equipment and tooling are used in the correct way	✓			
6. Equipment and tooling are cleaned and returned to its correct location	✓			
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	N/A	
Safety				
Using A-PPD related to the job	✓			
Follows relevant Workplace Safety Guidelines (LOTO, Safety Equipment)	✓			
State and follow Safety Precautions	✓			
Service man completes job without accident due to incorrect procedure using hand tools.	✓			
Tasks completed without damage equipment and tools	✓			

Tasks	Completed			Observation / Hints
	Yes	No	N/A	
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: Sada Adi Pratama 30 October 2015

Assessor: Setyawan STS 11/10/2015

Supervisor: _____ Date _____ Signature _____

Data Recorded: _____ Name _____ Date _____ Signature _____

No.:

Assembly Procedure Final Drive D&R (Validasi SBG)

Date: 11 / 11 / 2025

 • Duo Cone Floating Seal Corriat Prosedur Install

Pastikan semua komponen bersih dan bebas dari keturan, minyak atau karat. Floating seal ring harus tetap dipasangi berpasangan, tidak boleh mencampur seal baru dengan seal bekas dan toric sealing ring harus selalu baru. Bersihkan semua bagian menggunakan pembersih non flammable, lalu keringkan. Sebelum pemasangan, toric ring dibasahi dengan ISO propyl alcohol agar mudah masuk ke bawah labir starter, namun hindari penggunaan diklat api karena mudah terbakar. Saat memasang pastikan toric tidak terpelintir dan gunakan alat khusus, bukan obeng. Setelah seal terpasang, periksa tinggi pada 4 titik dengan toleransi max 1,0mm. Biarkan dua menit agar alkohol menguap, bersihkan permukaan dengan tisu bebas serat, lalu oleskan sedikit oli bersih pada permukaan seal tanpa menyentuh toric ring sebelum kedua seal disatukan dengan hati-hati.


Gunakan finger pressure untuk install toric sealing ring, bukan screw driver

 • Tujuan Bearing Preload adalah untuk memberikan gaya tekan awal pada bearing agar komponen didalamnya seperti ball/roller selalu berada dalam posisi yang stabil tanpa celah dan mencegah slip/keausan dini

 • Prosedur Bearing Preload

1. Semua komponen (Bearing, Poros, housing) dibersihkan & diperiksa agar tidak rusak
2. Bearing dipasang dengan alat khusus hingga duduk rata tanpa miring
3. Lakukan penyetelan awal dengan mengencangkan spacer sesuai posisi yg ditentukan untuk memberikan tekanan awal
4. Preload diperiksa dengan memutar poros dan memastikan tidak terlalu kencang/longgar
5. Uji menggunakan Dial Indicator
6. Jika hasil belum sesuai, lakukan penyetelan ulang hingga pergerakan bearing halus & stabil lalu kunci posisi nut agar tidak berubah

ANALISIS LINGKUNGAN KESELAMATAN KERJA / JOB SAFETY ENVIRONMENT ANALYSIS

Pekerjaan / Task	DA Final Drive DGR	Nomor JSEA / JSEA Number		Halaman / Page	1	Dari / Of	2
Tanggal Pembuatan JSEA / Date of JSEA	11 November 2025	Departemen / Dept	Service	Tempat Kerja / Work Location	Workshop TAB		
Disusun Oleh / Compiled By	Yuda Adh	TTD Sign		Review Oleh / Reviewed By	SHE	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: **Normal** Cuaca / Weather: **Cerah** Medan / Terrain: **Rata**

Pengendalian Sumber Bahaya / Hazardous Energy Control	<input type="checkbox"/> Listrik / Electrical	<input checked="" type="checkbox"/> Gravitasi (Benda jatuh, tertimpa) / Gravitation (Falling objects, struck down)	<input type="checkbox"/> Pneumatik / Pneumatic
	<input type="checkbox"/> Hidraulik / Hydraulic	<input checked="" type="checkbox"/> Mekanis / Mechanical	<input type="checkbox"/> Panas / Thermal
APD yang diperlukan / Required PPE	<input checked="" type="checkbox"/> Helm / Safety Helm	<input type="checkbox"/> Pelindung Muka / Face shield	<input checked="" type="checkbox"/> Kacamata / Safety Glass
	<input checked="" type="checkbox"/> Sarung Tangan / Hand Gloves	<input type="checkbox"/> Pelindung Pernafasan / Respiratory Protection	<input type="checkbox"/> Perlindungan Kejatuhan / Fall Protection
	<input checked="" type="checkbox"/> Sepatu / Safety Shoes	<input type="checkbox"/> Pelindung Telinga / Hearing Protection	<input type="checkbox"/> Lain-Lain / Other

Hal yang perlu dipertimbangkan 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 desain.

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
A ERP/MERP			
1.	Saat pekerjaan terjadi gempa	tertimpa reruntuhan	1.1 Segera evakuasi menuju master point baru ditetapkan/ tempat terbuka 1.2 Melaporkan kejadian kepada atasan
2.	Saat pekerjaan ada teknisi yang pingsan	Cidera kepala, tangan tergores	2.1 Lakukan protokol P3K 2.2 Segera evakuasi korban menuju fasilitas kesehatan terdekat 2.3 Melaporkan kejadian kepada atasan
B Langkah Pekerjaan			
1.	Walk Around Inspection	Tersandung Komponen	1.1 Pindahkan komponen ke tempat yang aman 1.2 Perhatikan langkah kaki
		Komponen Terkontaminasi	1.3 Lindungi komponen dengan plastic wrap
2.	Prepare Tools	Terbentur Tool Box	2.1 Fokus saat bekerja
		Tool Terjatuh	2.2 Perhatikan jalannya Toolbox yang aman 2.3 Fokus saat Prepare Tool 2.4 Lap komponen dengan Rava Majun 2.5 Pastikan Tool layak digunakan
3.	Doing Dissassemble Final Drive DGR	Terjepit Komponen	3.1 Perhatikan titik jepit 3.2 Lakukan pembongkaran dengan benar 3.3 Perhatikan posisi yg aman untuk memegang 3.4. Lap dengan Majun sebelum di bongkar 3.5 Pakai posisi yang aman untuk doing job 3.6 Perhatikan beban yang akan diangkat
		Bahaya Ergonomi	

