Prüfbericht-Nr.: *Test report no.:*	**CN257DIH 001**	**Auftrags-Nr.:** *Order no.*:	178225796 40	Seite 1 von 9 *Page 1 of 9*
Kunden-Referenz-Nr.: *Client reference no.*:	2533689	**Auftragsdatum:** *Order date:*	2025-08-14	
Auftraggeber: *Client*:	SHANDONG RIPPA MACHINERY GROUP CO., LTD. The norht of Guang'an Road and east of Gaoxin Avenue (Liaohe Road), High tech Zone, Jining City, Shandong 272000, P.R. China			
Prüfgegenstand: *Test item*:	Hydraulic Excavator			
Bezeichnung / Typ-Nr.: *Identification / Type no.*:	R57			
Auftrags-Inhalt: *Order content*:	Noise emission test			
Prüfgrundlage: *Test specification*:	2000/14/EC with amendment 2005/88/EC Article 12 EU/2024/1208 Annex III item 20 *EN ISO 3744:2010* *ISO 6395:2008*			

Wareneingangsdatum: *Date of sample receipt*:	2025-08-05
Prüfmuster-Nr.: *Test sample no:*	Refer to page 8 for details
Prüfzeitraum: *Testing period*:	2025-08-05 – 2025-08-05
Ort der Prüfung: *Place of testing*:	As client
Prüflaboratorium: *Testing laboratory:*	TÜV Rheinland LGA Products GmbH
Prüfergebnis*: *Test result**:	Pass

geprüft von: *tested by:*	x Bo Qi	**genehmigt von:** *authorized by*:	x Oscar Chi
Datum: *Date: 2025-08-14*		**Ausstellungsdatum:** *Issue date: 2025-08-14*	
Stellung / Position:	Bo Qi/PE	**Stellung** / Position:	Oscar Chi/Authorizer

Sonstiges / *Other*:
A-weighted sound power level was measured according to the method laid down in the NEW Annex III item 20 of the EU/2024/1208. The NEW Annex III item 20 is same as the method laid down in the OLD Annex III of the 2000/14/EC.
The correct and complete marking of equipment was checked and it is compliant to Article 11 of noise directive 2000/14/EC. The EC declaration of conformity was checked and it is compliant to Article 8 of noise directive 2000/14/EC.

Zustand des Prüfgegenstandes bei Anlieferung: *Condition of the test item at delivery*: Prüfmuster vollständig und unbeschädigt *Test item complete and undamaged*

* Legende:	P(ass) = entspricht o.g. Prüfgrundlage(n)	F(ail) = entspricht nicht o.g. Prüfgrundlage(n)	N/A = nicht anwendbar	N/T = nicht getestet
* *Legend:*	*P(ass) = passed a.m. test specification(s)*	*F(ail) = failed a.m. test specification(s)*	*N/A = not applicable*	*N/T = not tested*

Dieser Prüfbericht bezieht sich nur auf das o.g. Prüfmuster und darf ohne Genehmigung der Prüfstelle nicht auszugsweise vervielfältigt werden. Dieser Bericht berechtigt nicht zur Verwendung eines Prüfzeichens.
This test report only relates to the above mentioned test sample. Without permission of the test center this test report is not permitted to be duplicated in extracts. This test report does not entitle to carry any test mark.

Anmerkungen
Remarks

1	Alle eingesetzten Prüfmittel waren zum angegebenen Prüfzeitraum gemäß eines festgelegten Kalibrierungsprogramms unseres Prüfhauses kalibriert. Sie entsprechen den in den Prüfprogrammen hinterlegten Anforderungen. Die Rückverfolgbarkeit der eingesetzten Prüfmittel ist durch die Einhaltung der Regelungen unseres Managementsystems gegeben. Detaillierte Informationen bezüglich Prüfkonditionen, Prüfequipment und Messunsicherheiten sind im Prüflabor vorhanden und können auf Wunsch bereitgestellt werden. *The equipment used during the specified testing period was calibrated according to our test laboratory calibration program. The equipment fulfils the requirements included in the relevant standards. The traceability of the test equipment used is ensured by compliance with the regulations of our management system.* *Detailed information regarding test conditions, equipment and measurement uncertainty is available in the test laboratory and could be provided on request.*
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3	Prüfklausel mit der Note * wurden an qualifizierte Unterauftragnehmer vergeben und sind unter der jeweiligen Prüfklausel des Berichts beschrieben. Abweichungen von Prüfspezifikation(en) oder Kundenanforderungen sind in der jeweiligen Prüfklausel im Bericht aufgeführt. *Test clauses with remark of * are subcontracted to qualified subcontractors and descripted under the respective test clause in the report.* *Deviations of testing specification(s) or customer requirements are listed in specific test clause in the report.*
4	Die Entscheidungsregel für Konformitätserklärungen basierend auf numerischen Messergebnisen in diesem Prüfbericht basiert auf der "Null-Grenzwert-Regel" und der "Einfachen Akzeptanz" gemäß ILAC G8:2019 und IEC Guide 115:2021, es sei denn, in der auf Seite 1 dieses Berichts genannten angewandten Norm ist etwas anderes festgelegt oder vom Kunden gewünscht. Dies bedeutet, dass die Messunsicherheit nicht berücksichtigt wird und daher auch nicht im Prüfbericht angegeben wird. Zu weiteren Informationen bezueglich des Risikos durch diese Entscheidungsregel siehe ILAC G8:2019. *The decision rule for statements of conformity, based on numerical measurement results, in this test report is based on the "Zero Guard Band Rule" and "Simple Acceptance" in accordance with ILAC G8:2019 and IEC Guide 115:2021, unless otherwise specified in the applied standard mentioned on Page 1 of this report or requested by the customer. This means that measurement uncertainty is not taken in account and hence also not declared in the test report. For additional information to the resulting risk based of this decision rule please refer to ILAC G8:2019.*
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Prüfbericht-Nr.: CN257DIH 001
Test report no.:

Produktbeschreibung
Product description

1	**Produktdetails** *Product details*	Hydraulic Excavator (crawler type)
2	**Maße / Gewicht** *Dimensions / Weight*	Refer to page 5 for details
3	**Bedienelemente** *Operating elements*	Net Installed Power (P): 35 kW
4	**Ausstattung / Zubehör** *Equipment / Accessories*	Bucket application
5	**Verwendete Materialien** *Used materials*	Diesel engine
6	**Sonstiges** *Other*	-
7	**Prüfmusterbereitstellung** *Test sample obtaining*	☐ Sending by customer ☐ Sampling by TÜV Rheinland Group ☒ others: provided by the client at manufacturing plant

Overview	Overview
	
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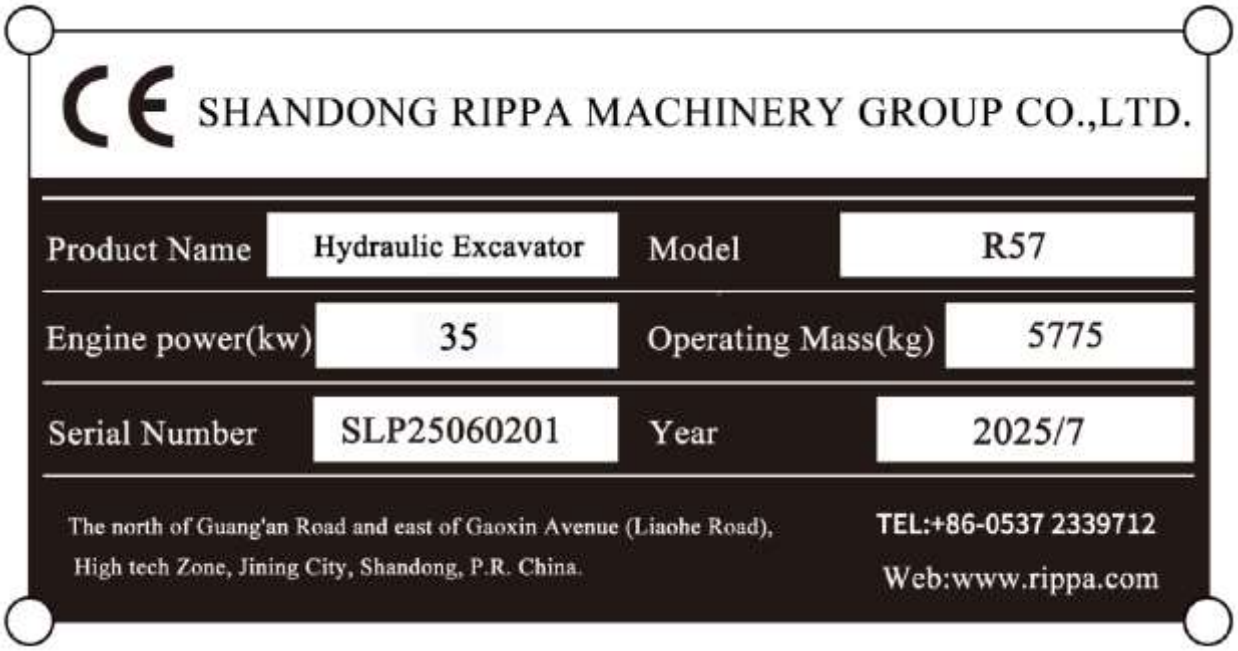
Produktbeschreibung
Product description

General Information:

License holder (Manufacturer)	:	SHANDONG RIPPA MACHINERY GROUP CO., LTD. The norht of Guang'an Road and east of Gaoxin Avenue (Liaohe Road), High tech Zone, Jining City, Shandong 272000, P.R. China
Manufacturing plant (Test location)	:	SHANDONG RIPPA MACHINERY GROUP CO., LTD. The norht of Guang'an Road and east of Gaoxin Avenue (Liaohe Road), High tech Zone, Jining City, Shandong 272000, P.R. China

Three samples of R57 were selected as representative testing samples.

Indication of the machine rating label:



Indication of the guaranteed sound power level:

Produktbeschreibung
Product description

Specifications:

Model	R57	-	-
Operation mass	5775 kg	-	-
Overall dimension (L*W*H)	5850*2000*2580 mm	-	-
Bucket	0.175 m^3	-	-
Battery operated	12VDC	-	-
Engine type	V2607-CR-EW52	-	-
Engine manufacturer	Kubota	-	-
Engine power	35 kW	-	-
Engine speed	2200 /min	-	-

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen/** *Measuring results - Remarks*	**Ergebnis** *Result*

1. TECHNICAL DATA OF THE SAMPLES

Description	:	Hydraulic Excavator
Type	:	R57
Engine		
Type	:	Kubota; V2607-CR-EW52
Rated power	:	35 kW; 2200 /min
Cooling fan		
Type	:	Directly connected to engine
Operation speed	:	2800 rpm

2. INSTALLATION AND OPERATING CONDITIONS (ISO 6395:2008 Annex B)

Basic machine cycle: The dynamic cycle, without moving material, comprises three 90° swings to the left of the operator and back. Each swing shall be from the x-axis to the y-axis, and back to x-axis. A single cycle consists of three continuous 90° swings to the left and back again, while moving the front end attachment through a complete sequence for each 90° swing and back.

Hoe attachment: At the beginning of the cycle, the boom and arm shall be adjusted so as to place the bucket at 75 % of the maximum reach with the bucket as close as possible to the ground surface, but not touching the ground. The cutting edge of the bucket in the rolled forward position shall be at an angle of 60° to the test-site measurement surface. First, raise the boom and simultaneously retract the arm so that the bucket follows the ground surface for 50 % of the remaining boom and arm travel distance. Then, roll back or curl the bucket. Lift the bucket by raising the boom and continue to retract the arm to simulate the adequate clearance (30 % of maximum bucket lift height) needed to swing across the edge of the trench. Execute a 90° swing to the left of the operator. Raise the boom during the swing and extend the arm until the bucket has reached 60 % of maximum boom lift height. Then uncurl the arm until it is 75 % extended. Roll forward or uncurl the bucket until the cutting edge is vertical. Execute a return swing to the starting position, with the boom being lowered and the bucket curled.

3. TEST ENVIRONMENT (ISO 6395:2008 Annex B)

Hard reflecting plane: The test area bordered by the vertical projection of the microphones to the ground shall consist of concrete or non-porous asphalt.

For test-site measurement ground surfaces consisting of a hard reflecting plane such as concrete or nonporous asphalt, and having negligible sound-reflecting obstacles within a distance from the source equal to three times the measurement hemisphere radius, it may be assumed that the absolute value of environmental correction, K_{2A}, is less than or equal to 0,5 dB, and can therefore be disregarded. In this case, K_{2A} shall be equal to 0 dB.

Environmental correction K_{2A}= 0 dB

4. TECHNICAL DATA OF THE SAMPLES

Atmospheric pressure	:	99.9	kPa
Ambient air temperature	:	36	(-10 ~ 35) °C
Humidity	:	61	%
Wind speed	:	4	≤ 8 m/s
Background noise	:	45.5	dB(A)

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen/** *Measuring results - Remarks*	**Ergebnis** *Result*

5. BACKGROUND NOISE

If ΔLp > 15 dB, K_{1A} is assumed to be zero, and no correction for background noise shall be applied.

If 6 dB ≤ ΔLp ≤ 15 dB, corrections shall be calculated and corrections shall be applied.

Background noise correction K_{1A} = 0

6. MEASUREMENT METHOD – DETERMINATION OF SOUND POWER LEVEL

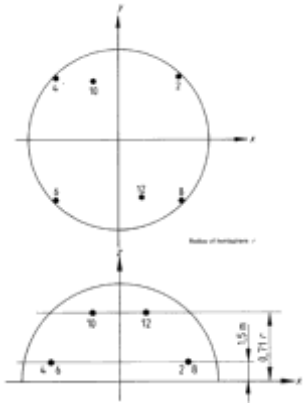


Figure 1 — Microphone array on the hemisphere

Microphone position			
1	0,7	0,7	1,5 m
2	−0,7	0,7	1,5 m
3	−0,7	−0,7	1,5 m
4	0,7	−0,7	1,5 m
5	−0,27	0,65	0,71 r
6	0,27	−0,65	0,71 r

Table 1 — Co-ordinates of microphone positions

The measurement surface to be used for the test shall be a hemisphere.

The radius of the hemisphere shall be determined by the basic length, *l*, of the machine: l = 2705 mm, r = 10 m.

The radius shall be

– 4 m when the basic length, *l*, of the machine to be tested is less than 1,5 m,

– 10 m when the basic length, *l*, of the machine to be tested is greater than or equal to 1,5 m but less than 4 m,

– 16 m when the basic length, *l*, of the machine to be tested is greater than or equal to 4 m but less than 8 m.

Six measuring positions shall be used. Microphone positions and their coordinates shall be as shown in Figure 1 and as given in Table 1.

Calculate the three values of the sound power level from the three sets of data obtained at six microphone positions. If two of the three values so obtained do not differ by more than 1 dB, further measurements are not necessary. If this is not case, continue taking measurements until two values within 1 dB of each other are obtained. Report, as the value of the A-weighted sound power level, the arithmetic mean of the two highest values that are within 1 dB of each other.

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen/** *Measuring results - Remarks*	**Ergebnis** *Result*

7. RESULTS

Sample 1# Serial number: SLP25060201; Engine speed: 2100 rpm; Fan speed: 2795 rpm			
Measurement Position	Equivalent continuous A-weighted Sound pressure LpAeq,T [dB(A)]		
	Measurement Cycle 1	Measurement Cycle 2	Measurement Cycle 3
1	66.0	66.0	66.0
2	68.1	68.4	68.0
3	69.8	69.9	70.4
4	67.2	67.2	67.4
5	67.4	67.4	67.4
6	66.9	67.3	67.0
$L'p_{(ST)}$	67.74	67.88	67.93
LpAeq,T	67.91		
LwA	95.91		

Sample 2# Serial number: SLP25060202; Engine speed: 2100 rpm; Fan speed: 2795 rpm			
Measurement Position	Equivalent continuous A-weighted Sound pressure LpAeq,T [dB(A)]		
	Measurement Cycle 1	Measurement Cycle 2	Measurement Cycle 3
1	66.5	66.4	66.3
2	68.9	69.2	69.0
3	68.7	68.7	68.7
4	67.3	67.5	67.0
5	67.3	67.4	67.9
6	67.1	67.1	67.1
$L'p_{(ST)}$	67.72	67.82	67.77
LpAeq,T	67.80		
LwA	95.80		

Sample 3# Serial number: SLP25060203; Engine speed: 2100 rpm; Fan speed: 2795 rpm			
Measurement Position	Equivalent continuous A-weighted Sound pressure LpAeq,T [dB(A)]		
	Measurement Cycle 1	Measurement Cycle 2	Measurement Cycle 3
1	66.1	66.1	66.1
2	68.0	67.5	67.9
3	69.3	68.9	69.4
4	67.0	67.3	67.0
5	67.5	67.8	67.9
6	67.3	67.5	68.0
$L'p_{(ST)}$	67.65	67.59	67.83
LpAeq,T	67.74		
LwA	95.74		

Remark: The calculated A-weighted sound power level $LwA = LpAeq,T - K_{1A} - K_{2A} + 10lg(S/S_0)$.

S is the area of the hemispherical measurement surface, in square metres; $S_0 = 1\ m^2$.

$10lg(S/S_0) = 20$ for 4m radius, 28 for 10m radius and 32.1 for 16m radius.

Absatz *Clause*	**Anforderungen - Prüfungen /** *Requirements - Tests*	**Messergebnisse – Bemerkungen/** *Measuring results - Remarks*	**Ergebnis** *Result*

8. CONCLUSIONS

The average value of the measurements LwAm = 95.82 dB

Uncertainty K is calibrated according to the guideline:

The standard deviation of production S_p = 0.09 dB

The standard deviation of repeatability S_r = 0.50 dB

The total standard deviation $S_t = \sqrt{S_p^2 + S_r^2}$ = 0.51 dB

The value of the coverage factor taken from the Student's statistical table assuming a confidence level of 95% is 2.92. This will result in a value of uncertainty K = 2.92 x S_t = 1.49 dB

Uncertainty K is calibrated according to the RfU No. 07-003 R2:

The standard deviation of production $\sigma_P = 1.3 * S_p$ = 0.12 dB

The standard deviation of reproducibility σ_R = 0.50 dB

The total standard deviation $\sigma_t = \sqrt{\sigma_R^2 + \sigma_P^2}$ = 0.51 dB

The uncertainty K = $1.5 * \sigma_t$ = 0.77 dB

Model	Net Power (kW)	Measured Value (dB)	Guarantee Value (dB)	Limit Value (dB)	Verdict
R57	35	95.8	97	97	PASS

END OF TEST REPORT