

## The Automotive Research Association of India

(Research Institute of the Automotive Industry with Ministry of Heavy Industries, Govt. of India)

Non-Transferable

<ul> <li>To carry out the IP- 68 protection test as per IEC 60529</li> <li>Dust Test for First Numeral '6': On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the enclosure.</li> </ul>			TEST REPORT	
J. NAME AND ADDRESS OF THE CUSTOMER       M TORQ CONTROLS INDIA B-3,10,18E General Block, Near Pateja Forging, MIDC Bhosan, Pune 411026.         Name of Contact Person Contact no.       B422007317         Email ID       sales @ mtorpindla com         O CUSTOMERS LETTER REF.       E-mail Date         I CSP Receipt of Date       05.01.2023         D DESCRIPTION OF TEST COMPONENT:       Rack &Pinion Pneumatic Actuator Assembly.         M TORQ CONTROLS INDIA       B-3.10,19E General Block, Near Pateja Forging, MIDC Bhosan, Pune - 411026.         b. Name of The Manufacturer       B-3.10,19E General Block, Near Pateja Forging, MIDC Bhosan, Pune - 411026.         c. Identification no / Part No.       Pneumatic Actuator Assembly         d. Model No.       MTSRMIDA Series         e. Assembly Drawings No. with Rev. No.       MTSR.MIDA Series         f.       Identification test as per IEC 60529         10       Vestor Test for Second Numeral 'S': To carry out the IP- 88 protection test as per IEC 60529         11       On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside th enclosure.         20       Water Test for Second Numeral 'S': On inspection after the test in accordance with the requirements as per Clause 14.2.7 and 14.3 of IEC 60529 water entered inside the equipment shall not: > Reach live parts or windings not designed to operate when wet. > Accumulate near the conduit hole (cable entry) or enter the cable. <td< th=""><th>lo. SHL</th><th>_/16/2022-2023/300002750</th><th></th><th>Date: 02.02.2023</th></td<>	lo. SHL	_/16/2022-2023/300002750		Date: 02.02.2023
THE CUSTOMER       B-3.10.19E General Block, Near Pateja Forging, MIDC Bhosari, Pune-411026.         Name of Contact Person       Mr. B.B. Kadam, Gontact no.         Contact no.       9422007317         Email ID       sales 9 mitorigida.com         10       CUSTOMERS LETTER REF.         11       CSP Receipt of Date         12       CUSTOMERS LETTER REF.         13       Name of The Component         14       Name of The Component         15       Name of The Component         16       Model No.         17       Basenbity Drawings No. with Rev. No.         18       Name of The Component         19       DESCRIFTION OF TEST COMPONENT:         10       Reck Splinion Pneumatic Actuator         16       Madel No.         10       Photograph of The Component         10       REST OBJECTIVE, REQUIREMENTS:         10       To carry out the IP- 68 protection liest as per IEC 60529         10       Dast Test for First Numeral '6':         10       ninspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside th andosure.         18       Water Test for Socond Numeral '8':         19       Drinspection after the test in accordance with the requifements as per Clause 14.2.7 and 14.3 of IEC			•••••••••••••••••••••••••••••••••••••••	
MIDC Bhosari, Pune-411026.       Name of Contact Person     Mr. B.B. Kadam,       Contact no.     9422007317       Email IO     sales @mitordindia.com       CUSTOMERS LETTER REF.     E-mail Date: 0.2012023       D DESCRIPTION OF TEST COMPONENT:     a.       a.     Name of The Component     Rack &Phinio Pneumatic Actuator Assembly.       b.     MTOR CONTROLS INDIA       b.     Name of The Manufacturer     B-3.01.912 General Block, Near Pateja Forging,       MIDC Bhosari, Pune - 411026.     MTORY CONTROLS INDIA       c.     Identification no / Part No.     Pneumatic Actuator       d.     MODel No.     Pneumatic Actuator       e.     Assembly Drawings No. with Rev. No.     MTSR.NMTDA Series       e.     Assembly Orawings No. with Rev. No.     MTSR.DArk.Fr10/F14-S36-00-01-GA, REVISION NO. 0       Photograph of The Component     First Strop BeCTIVE, REQUIREMENTS:     To carry out the IP-68 protection test as per IEC 60529       10     TEST OB JECTIVE, REQUIREMENTS:     To carry out the IP-68 protection test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the enclosure.       2.     Water Test of Second Numeral 'S':     On inspection after the test in accordance with the requirements as per Clause 14.2.7 and 14.3 of IEC 60529 water entered not inchere with satisfactory operation of the equipment.       > Accumulate near the condult hole (cable entry) or enter the cable.    <				
Name of Contact Person       Mr. B.B. Kadam,         Contact no.       9422007317         Email ID       Estates @mitroincla.com         10       CUSTOMERS LETTER REF.       E-mail Dated: -02.01.2023         11       CSP Receipt of Date       05.01.2023         12       DESCRIPTION OF TEST COMPONENT:       Rack &Pinion Pneumatic Actuator Assembly.         a.       Name of The Component       Rack &Pinion Pneumatic Actuator Assembly.         b.       Name of The Manufacturer       B-3,10.19E General Block, Near Pateja Forging, MIDC Bhosan, Pune - 411028.         c.       Identification no./ Part No.       Preumatic Actuator         d.       Model No.       MTSRMTDA Series         e.       Assembly Drawings No. with Rev. No.       MT-SR-DA-K-F10/F14-S36-00-01-GA;REVISION NO. 0         Photograph of The Component       Fill Structure Series       To carry out the IP- 86 protection test as per IEC 60529         10       TEST OBJECTIVE, REQUIREMENTS:       To carry out the IP- 86 protection test as per IEC 60529         11       Dust Test for Second Numeral '8':       To ninspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside th enclosure.         2       Water Test for Second Numeral '8':       On inspection after the test as accordance with the requirements as per Clause 14.2.7 and 14.3 of IEC 60523 water entered inside the equipment alal not:	11	HECUSIOMER		
Contact no.       9422007317         Email D       sales @introduction.com         10       CUSTOMERS LETTER REF.       E-mail Dated 02.01.2023         11       CSP Receipt of Date       05.01.2023         10       DESCRIPTION OF TEST COMPONENT:       Rack &Pinion Pneumatic Actuator Assembly         11       Description of TEST COMPONENT:       Rack &Pinion Pneumatic Actuator Assembly         11       Description of TEST COMPONENT:       Rack &Pinion Pneumatic Actuator Assembly         11       Description of TEST COMPONENT:       Rack &Pinion Pneumatic Actuator Assembly         12       Description of The Component       Rack &Pinion Pneumatic Actuator         13       Model No.       MTSR/MTDA Series         14       Model No.       MTSR/MTDA Series         15       Rescription of The Component       MTSR/MTDA Series         16       TEST OBJECTIVE, REQUIREMENTS:       To carry out the IP-6 68 protection fest as per IEC 60529         15       To carry out the IP-6 68 protection fest as per IEC 60529       Dust Test for First Numeral 61:         16       nispection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the enclosure.         16       On inspection after the test in accordance with the requirements as per Clause 14.2.7 and 14.3 of IEC 605252 water entered inside the equipment shall not:			•••••••••••••••••••••••••••••••••••••••	
Email ID       sales@miorigindia.com         20       CUSTOMERS LETTER REF.       E-mail Dated: 02.01.2023         11       CSP Receipt of Date       00 6.01.2023         20       DESCRIPTION OF TEST COMPONENT:       Rack &Pinion Pneumatic Actuator Assembly.         a. Name of The Component       Rack &Pinion Pneumatic Actuator Assembly.         b. Name of The Manufacturer       B-3.10.19E General Block, Near Pateja Forging.         MIDC Bhosari, Pune – 411026.       Midodel No.         c. Identification no./ Part No.       MirSR/MTDA Series         e. Assembly Drawings No. with Rev. No.       MT-SR-DA-K-F10/F14-S36-00-01-GA:REVISION NO.0         Photograph of The Component       MirSR/MTDA Series         f.       Free Structure Presson         f.       Free Structure Presson         f.       TEST OBJECTIVE, REQUIREMENTS:         To carry out the IP- 68 protection test as per IEC 60529         Dust Test for First Numeral '8':         On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside th enclosure.         > Water Test for Second Numeral '8':         On inspection after the test in accordance with the requirements as per Clause 14.2.7 and 14.3 of IEC 60522 water entered inside the equipment 14.1 and IEC 60525 water entered inside the equipment 14.1 and IEC 60525 water entered inside the equipment 14.1 and IEC 60525 water entered inside the equipment 14.1	N	ame of Contact Person	Mr. B.B. Kao	dam,
0:0       CUSTOMERS LETTER REF.       E-mail Date: -02.01.2023         1:1       CSP Receipt of Date       06.01.2023         0:0       DESCRIPTION OF TEST COMPONENT:       a.         a.       Name of The Component       Rack &Pinion Pneumatic Actuator Assembly         b.       Name of The Manufacturer       Rack &Pinion Pneumatic Actuator Assembly         c.       Identification no./ Part No.       Pneumatic Actuator         d.       Model No.       MTSRNTDA Series         e.       Assembly Drawings No. with Rev. No.       MT-SR-DA-K-F10/F14-S36-00-01-GA:REVISION NO.0         Photograph of The Component       WTSRNTDA Series         f.       FST OBJECTIVE, REQUIREMENTS:         To carry out the IP- 68 protection test as per IEC 60529         10       TEST OF First Numeral 6":         On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the neclosure.         12       Water Test for Second Numeral 8':         On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the neclosure.         12       Water Test for Second Numeral 8':         On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the neclosure.         12       Water Test for Second Numeral 8':         On inspection after	C	ontact no.	9422007317	7
0:0       CUSTOMERS LETTER REF.       E-mail Date: -02.01.2023         1:1       CSP Receipt of Date       06.01.2023         0:0       DESCRIPTION OF TEST COMPONENT:       a.         a.       Name of The Component       Rack &Pinion Pneumatic Actuator Assembly         b.       Name of The Manufacturer       Rack &Pinion Pneumatic Actuator Assembly         c.       Identification no./ Part No.       Pneumatic Actuator         d.       Model No.       MTSRNTDA Series         e.       Assembly Drawings No. with Rev. No.       MT-SR-DA-K-F10/F14-S36-00-01-GA:REVISION NO.0         Photograph of The Component       WTSRNTDA Series         f.       FST OBJECTIVE, REQUIREMENTS:         To carry out the IP- 68 protection test as per IEC 60529         10       TEST OF First Numeral 6":         On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the neclosure.         12       Water Test for Second Numeral 8':         On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the neclosure.         12       Water Test for Second Numeral 8':         On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the neclosure.         12       Water Test for Second Numeral 8':         On inspection after				
11     CSP Receipt of Date     05.01.2023       00     DESCRIPTION OF TEST COMPONENT:     Rack &Pinion Pneumatic Actuator Assembly       a. Name of The Component     Rack &Pinion Pneumatic Actuator Assembly       b. Name of The Manufacturer     B-3.10.19E General Block, Near Pateja Forging, MIDC Bhosari, Pune – 411026.       c. Identification no/Part No.     Pneumatic Actuator       d. Model No.     MTSR/MTDA Series       e. Assembly Drawings No. with Rev. No.     MT-SR-DA-K-F10/F14-S36-00-01-GA;REVISION NO. 0       Photograph of The Component     File Component       f.     Image: Compon				
Image: Solution of the Component in the Actuation of the Component in the Actuation Assembly in the Actuation in the Actuatin in the Actuation in the Actuation in the A	·····			u 02.01.2023
a.       Name of The Component       Rack & Pinion Pneumatic Actuator Assembly         b.       Name of The Manufacturer       B-3, 10, 19E General Block, Near Pateja Forging, MIDC Bhosan, Pune – 411026.         c.       Identification no / Part No.       Pneumatic Actuator         d.       Model No.       MTSR/MTDA Series         e.       Assembly Drawings No. with Rev. No.       MT-SR-DA-K-F10/F14-S36-00-01-GA:REVISION NO. 0         Photograph of The Component       Figure Actuator         f.       Image: Component       Image: Component         f.       To component       Image			<u>i</u>	
b.       Name of The Manufacturer       M TORG CONTROLS INDIA         B-3 10.196 General Block, Near Pateja Forging, MIDC Bhosari, Pune – 411026.       Pneumatic Actuator         d. Model No.       Pneumatic Actuator         d. Model No.       MTSR/MTDA Series         e. Assembly Drawings No. with Rev. No.       MT-SR-DA-K-F10/F14-S36:00-01-GA:REVISION NO. 0.         Photograph of The Component       Figure 11:00000000000000000000000000000000000	3.0 D			
D       Name of The Manufacturer       B-3.10.19E General Block, Near Pateja Forging, MIDC Bhosari, Pune – 411026.         c.       Identification no./ Part No.       Preumatic Actuator         d.       Model No.       MTSR/MTDA Series         e.       Assembly Drawings No. with Rev. No.       MTSR./MTDA Series         f.       Fhotograph of The Component       Figure 2000 (1990) (19	а.	Name of The Compone	ent Rack & Pinio	on Pneumatic Actuator Assembly
Name of The Manufacturer       B-3,10,19E General Block, Near Pateja Forging, MIDC Brosain, Pune – 411026.         e.       Identification no./ Part No.       Pineumatic Actuator         d.       Model No.       MTSR/MTDA Series         e.       Assembly Drawings No. with Rev. No.       MTSR/MTDA Series         e.       Assembly Drawings No. with Rev. No.       MTSR/MTDA Series         e.       Assembly Drawings No. with Rev. No.       MTSR/MTDA Series         f.       Image: Component       Image: Component         f.       To componet the IP- 68 protection test as per IEC 60529	-		M TORQ CO	ONTROLS INDIA
MDC Brosari, Pune – 411026.         c.       Identification no./ Part No.         d.       Model No.         e.       Assembly Drawings No. with Rev. No.         MT-SR-DA-K-F10/F14-S36-00-01-GA;REVISION NO. 0.         Photograph of The Component         i.         i. <t< td=""><td>D.</td><td>Name of The Manufact</td><td>urer B-3.10.19E</td><td>General Block, Near Pateia Forging,</td></t<>	D.	Name of The Manufact	urer B-3.10.19E	General Block, Near Pateia Forging,
c.       Identification no./ Part No.       Pneumatic Actuator         d.       Model No.       MTSR/MTDA Series         e.       Assembly Drawings No. with Rev. No.       MTSR/MTDA Series         f.       Image: Component       Image: Component         f.       Image: Component       Image: Component <td></td> <td></td> <td></td> <td></td>				
d.       Model No.       MTSR/MTDA Series         e.       Assembly Drawings No. with Rev. No.       MT-SR-DA-K-F10/F14-S36-00-01-GA, REVISION NO. 0         Photograph of The Component       Image: Component of the Component       Image: Component of the Compo		Identification no / Dort		
e.       Assembly Drawings No. with Rev. No.       MT-SR-DA-K-F10/F14-S36-00-01-GA;REVISION NO. 0         Photograph of The Component       Image: Component of the Component       Image: Component of the Component of th				
f.       Image: Construction of the Component of th	d.			
f.       Image: Construction of the Component of th	е.	Assembly Drawings No	o. with Rev. No. MT-SR-DA-	K-F10/F14-S36-00-01-GA;REVISION NO. 0
f.       Image: Control of the equipment of the equipment.         4.0       TEST OBJECTIVE, REQUIREMENTS: To carry out the IP-68 protection test as per IEC 60529         1.1       Dust Test for First Numeral '6': On inspection after the test as per Clause 13.6 of IEC 60529, there should be no deposit of dust inside the enclosure.         1.2       Water Test for Second Numeral '8': On inspection after the test in accordance with the requirements as per Clause 14.2.7 and 14.3 of IEC 60529 water entered inside the equipment shall not: > Be sufficient to interfere with satisfactory operation of the equipment.         > Reach live parts or windings not designed to operate when wet.         > Accumulate near the conduit hole (cable entry) or enter the cable.         PREPARED BY:       VERIFIED BY:         Mathematical Structure       Authorised BY:         S. N. LONDHE       A. D. DEKATE         DEPUTY MANAGER       A. D. DEKATE         DEPUTY MANAGER       A. D. DEKATE         DEPUTY DIRECTOR       In-charge-Safety and Homologation Laboratory				
PREPARED BY:     VERIFIED BY:     AUTHORISED BY:       PREPARED BY:     VERIFIED BY:     AUTHORISED BY:       PREPARED BY:     PREPARED BY:     DR. B. V. SHAMSUNDARA       S. N. LONDHE     A. D. DEKATE     DR. B. V. SHAMSUNDARA       DEPUTY MANAGER     A. D. DEKATE     DR. B. V. SHAMSUNDARA       DEPUTY MANAGER     A. D. DEKATE     DR. B. V. SHAMSUNDARA	<b>1.0 TI</b> To <b>1.1 D</b> i or <b>1.2 W</b> Oi wa >	to carry out the IP- 68 protect <b>ust Test for First Numeral</b> In inspection after the test inclosure. <b>Vater Test for Second Num</b> In inspection after the test in ater entered inside the equip Be sufficient to interfere wit	EMENTS: tion test as per IEC 60529 '6': as per Clause 13.6 of IEC 60529, heral '8': n accordance with the requirements oment shall not: h satisfactory operation of the equipr	as per Clause 14.2.7 and 14.3 of IEC 60529 ment.
S. N. LONDHE A. D. DEKATE DEPUTY DIRECTOR DEPUTY MANAGER GENERAL MANAGER In-charge-Safety and Homologation Laboratory			· · ·	1
S. N. LONDHE A. D. DEKATE DEPUTY DIRECTOR DEPUTY MANAGER GENERAL MANAGER In-charge-Safety and Homologation Laboratory		Ch.S.		1
S. N. LONDHE A. D. DEKATE DEPUTY DIRECTOR DEPUTY MANAGER GENERAL MANAGER In-charge-Safety and Homologation Laboratory	A wy		Detrate	Bradace = 13.V.
An ISO 9001, ISO 14001, ISO 45001 and ISO/IEC 27001 Certified Organization				DEPUTY DIRECTOR In-charge-Safety and Homologation
		A	An ISO 9001, ISO 14001, ISO 45001 and ISO/IEC 27001 Ce	ertified Organization

TEST REPORT NO. SHL/16/2022-2023/3000027503/RT/0420

ARAI®

5.0 5.1	<ul> <li>TEST PROCEDURE:</li> <li>Dust Test for First Numeral '6' (as per Clause 13.6 of IEC 60529):</li> <li>The equipment under test was supported inside the test chamber and the pressure inside the equipment was maintained below atmospheric pressure by a vacuum pump.</li> <li>During the test, a minimum 80 times the volume of air was drawn into the enclosure, without exceeding a extraction rate of 60 volumes per hour or a depression of more than 200 mm of water on the manometer. Th test was carried out by using apparatus incorporating the principle shown in Figure 2 of IS/IEC 60529:2007</li> </ul>					
5.2	The test was carried of	eral '8' (as per Clause 14.2.7 of IEC but by completely immersing the enclo	<b>60529:2001):</b> sure in the water for 30 mins. at a depth of 1.4			
	meter from the surfac	e of the water.	-			
6.0	TEST RESULTS:	(6).				
6.1	Dust Test for First Numeral No dust ingress was observed	o. d inside the "Rack & Pinion Pneumatic	Actuator Assembly "			
• •	-		recurrent recombly.			
6.2	Water Test for Second Num	eral '8'. ed inside the "Rack & Pinion Pneumat	ic Actuator Assembly"			
6.3	Test Duration	Start Date:- 10.01.2023	End Date:- 12.01.2023			
7.0	CONCLUSION:		Eliu Dale 12.01.2025			
7.0	"Rack & Pinion Pneumatic A	ctuator Assembly" as mentioned in S vhen tested as per IS/IEC 60529:2001	r. no. 3 of this report, tested meet the IP 6			
Discla	aimer:					
		Reports / Developmental Test Reports for ver vehicle(s) or sample(s) submitted by the application	nicles/ components/ parts/ assemblies etc. based on the ant and testing thereof.			
а	and their provisions as amended from t		ance to Motor Vehicle Act / Central Motor Vehicles Rule which ARAI is authorized. Other Rules/ Acts are outsid			
t	Test(s) on prototype/ vehicle(s) or sample(s) is/are carried out on the basis of standard procedures as notified under specific rules / requested to the applicant. Results of such tests are the property of bearer of Test Reports / Extension Reports / Developmental Test Reports. These result cannot be disclosed unless specifically so ordered by Government, Court, etc.					
	Unless otherwise supported by a separate Certificate, this Test Reports / Extension Reports / Developmental Test Reports shall not be considered in isolation as valid Type Approval for any vehicle.					
Т	est Reports is issued. Further, ARAI i	vehicles/ components/ parts/ assemblies etc. fo s not responsible for ensuring manufacturing qu Reports / Developmental Test Reports is/are iss	r which Test Reports / Extension Reports / Development uality of the vehicles/ components/ parts/ assemblies et sued.			
	ARAI is in no way responsible for any misuse or copying of any design/ type/ system in connection with entire vehicle/ components/ parts ar assemblies covered under the Test Reports / Extension Reports / Developmental Test Reports is/are issued.					
F		is/are issued and ARAI shall not be liable for an	ble responsibility of the bearer of Test Reports / Extension by claims or damages. The bearer shall alone be liable for			
		ation, to initiate cancellation/ withdrawal of the ud, misrepresentation, when it surfaces and cor	Test Reports / Extension Reports / Developmental Te nes in the knowledge of ARAI.			
The a Repoi		II have the jurisdiction in respect of any dis	spute, claim or liability arising out of this certificate			
tepoi	PREPARED BY:	VERIFIED BY:	AUTHORISED BY:			
	AUGURA	Depare				
	~					
	S. N. LONDHE DEPUTY MANAGER	A. D. DEKATE GENERAL MANAGER	DR. B. V. SHAMSUNDARA DEPUTY DIRECTOR In-charge-Safety and Homologation			
Diaco	e of Issue: Kothrud, Pune		Laboratory			



