

Drag chain test of a cable

Item number:	29001302
Production conf. no.:	1281746
Type designation:	Ethernet/Cat5 Li9Y91Y(St)C91Y 4xAWG24/19
Initiator:	Mr. Muckes
Drag chain system:	1m - drag chain test facility

Test parameters:	Acceleration [m/s ²]	20
	Speed [m/s]	3
	Bending radius chain [mm]	40
	Bending factor [x D]	6,20
	Drag chain travel path [m]	1
	Built-in cable length [m]	1
	Total length of cable [m]	40
	Drag chain type	EKD Kolibri 30.125.1 / 40 x 875 (25 Glieder)

1m - drag chain test facility:



Images of the test specimen after removal:



Result:	Date of expansion	07.11.2025
	Examination task	Life long
	Test cycles achieved	19.557.769
	Tester	M. Sichart

Note:	HF measurements with Fluke at regular intervals. Reason for removal: IL and RL measurements outside limit curve at 19.47 million cycles.
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High-frequency test parameters

Measurement of Cat. 5e properties before and after testing

Measuring instrument:	FLUKE DSX2-8000
Limit curves acc. to:	TIA Cat 5e Channel
Total length of cable:	40m
Test temperature:	Room temperature
Tester:	M. Sichart

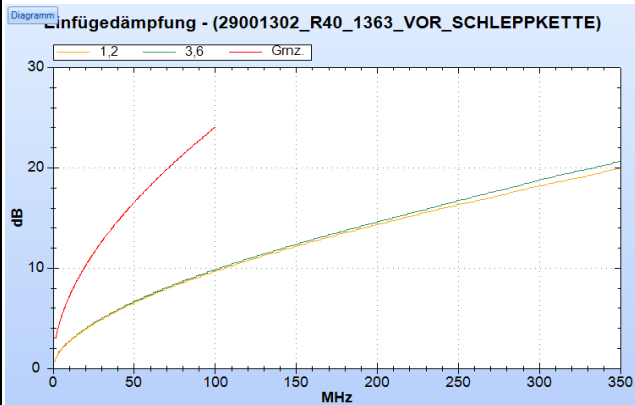


(High-frequency measuring equipment)

Result of the measurement

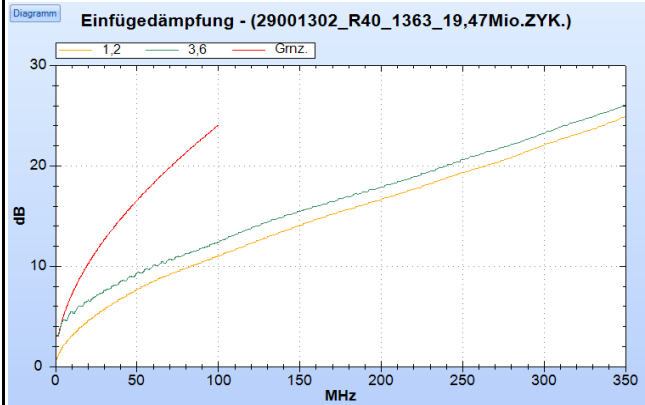
Occupancy plan before installation	Occupancy plan after removal
1 ————— 1 2 ————— 2 3 ————— 3 6 ————— 6 4 — 0,0 m — 4 5 — 0,0 m — 5 7 — 0,0 m — 7 8 — 0,0 m — 8 S ————— S	1 ————— 1 2 ————— 2 3 ————— 3 6 ————— 6 4 — 0,0 m — 0,0 m — 4 5 — 0,0 m — 0,0 m — 5 7 — 0,0 m — 0,0 m — 7 8 — 0,0 m — 0,0 m — 8 S ————— S
Continuity present	Continuity present

Electrical Cat. 5e values before installation



Insertion loss before installation

Electrical Cat. 5e values after removal



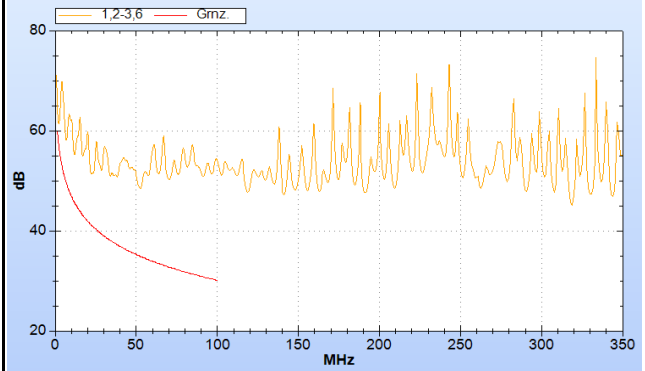
Insertion loss after removal

NEXT - (29001302_R40_1363_VOR_SCHLEPPKETTE)



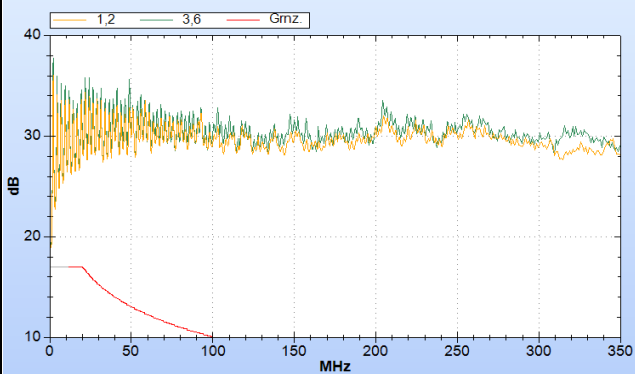
NEXT before installation

NEXT - (29001302_R40_1363_19,47Mio.ZYK.)



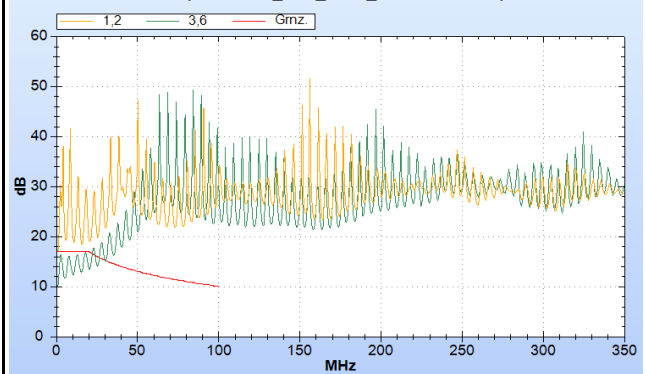
NEXT after removal

RL - (29001302_R40_1363_VOR_SCHLEPPKETTE)

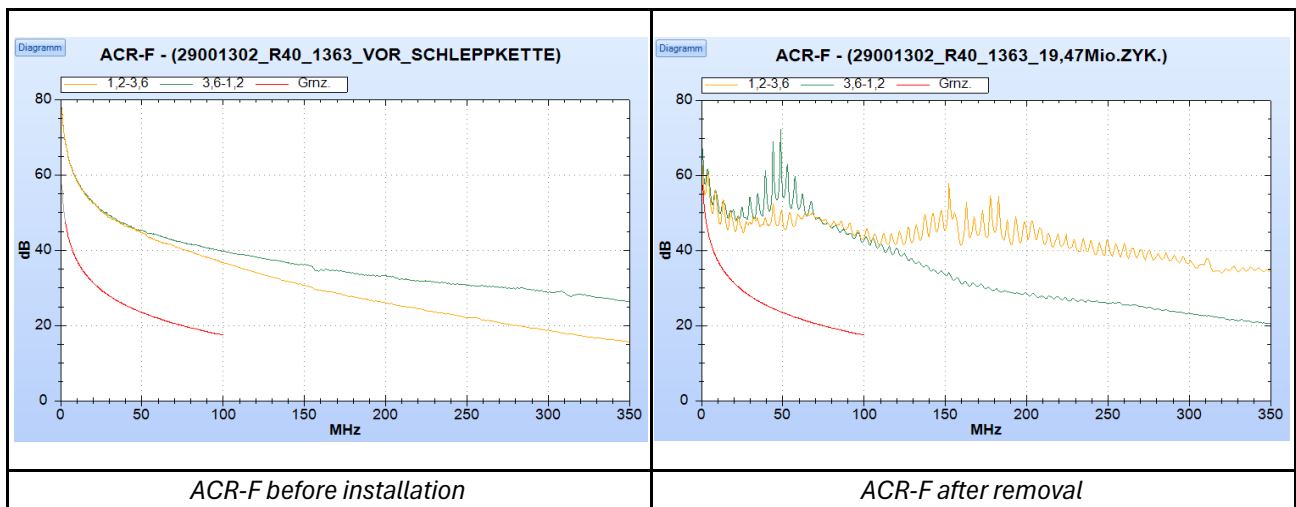
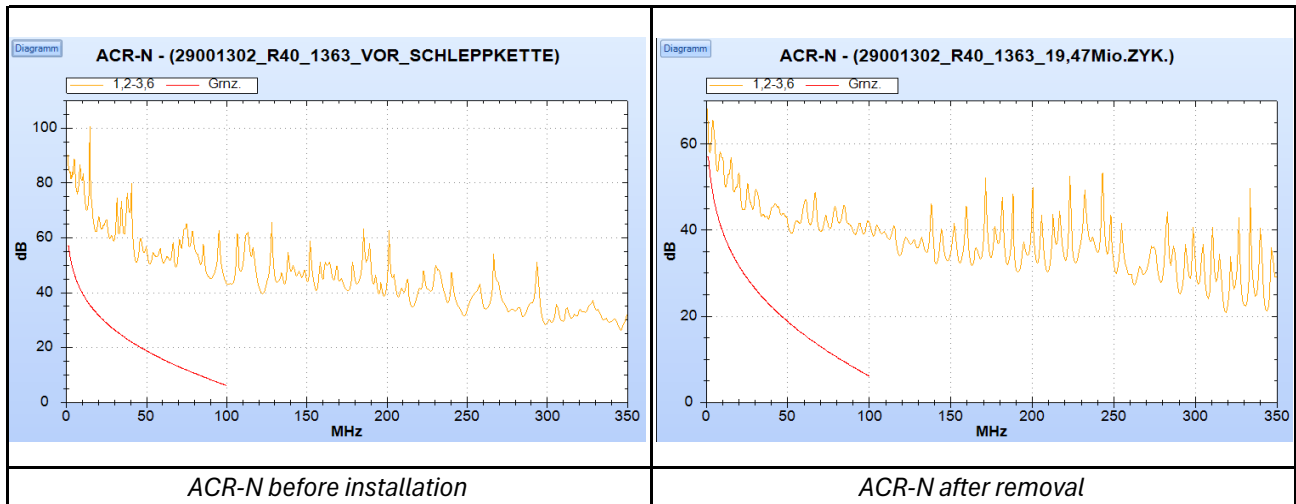


Return loss before installation

RL - (29001302_R40_1363_19,47Mio.ZYK.)



Return loss after removal

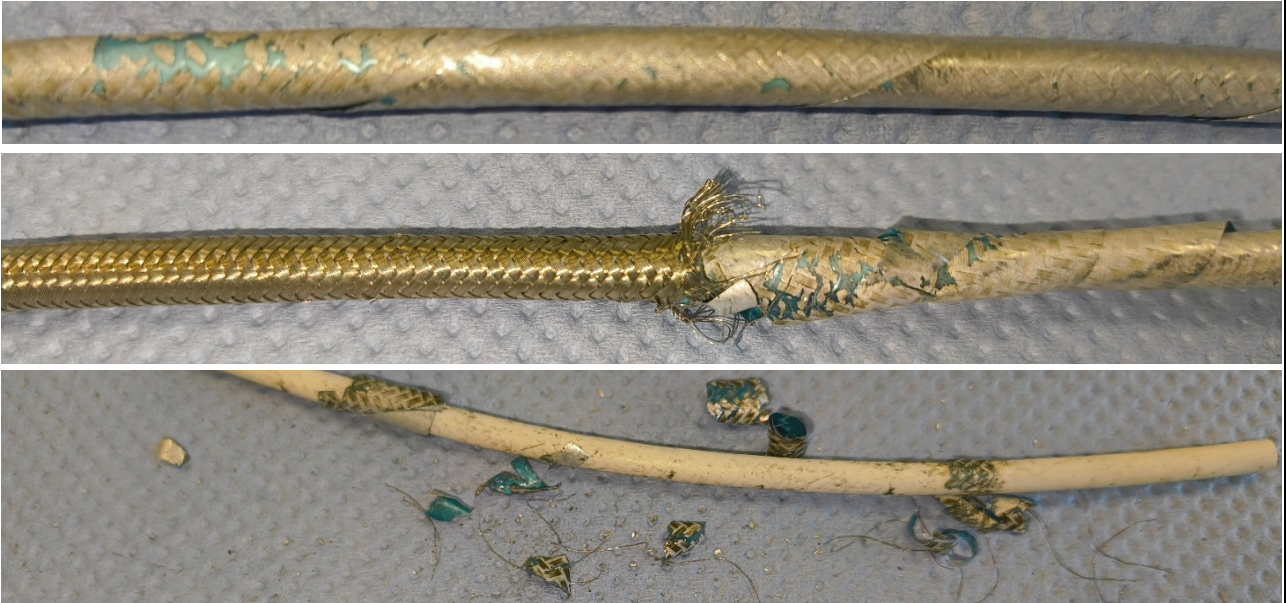


Note:	Before installation, all values were within the normative specifications. After removal, insertion loss (IL) and return loss (RL) were outside the limit curve.
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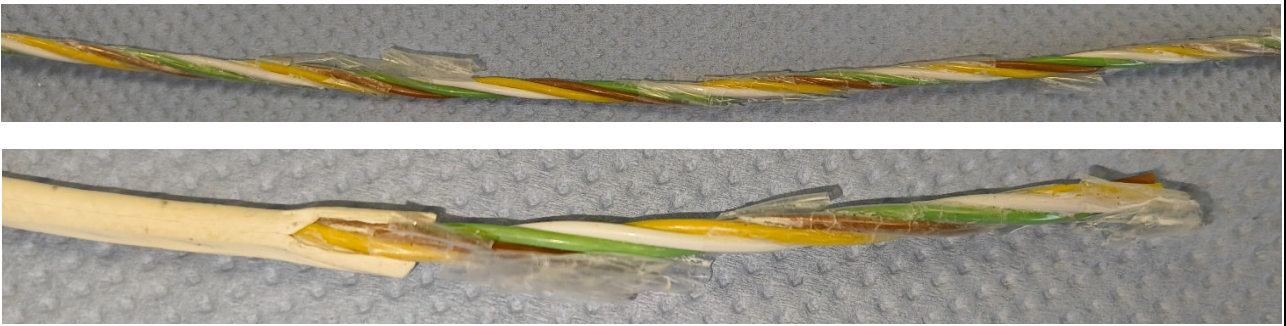
Sectioning a cable

Outer jacket	
	
Note:	Abrasion in spots up to the shield

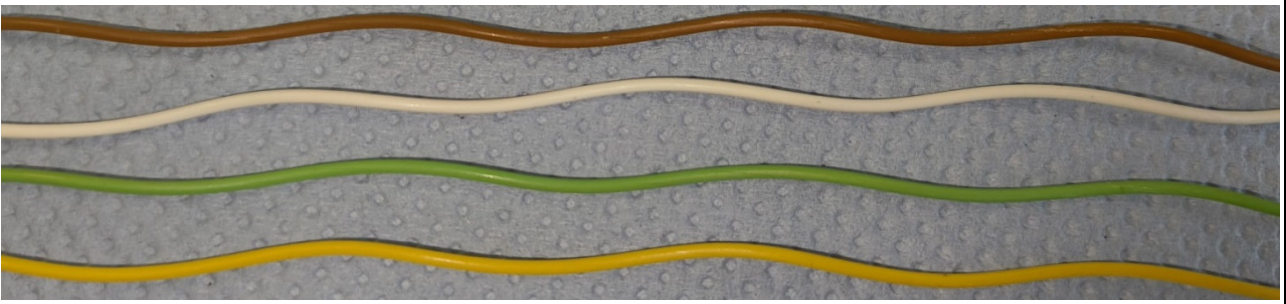
Overall shield	
	
Note:	Slightly frayed in spots, individual wires broken

Aluminium foil shielded	
	
Note:	Foil deteriorates very easily; when the shield is removed by hand, only individual pieces of the foil are revealed

Inner jacket	
	
Note:	No defects observed

Foil	
	
Note:	Foil broken; only individual pieces remain beneath the inner jacket

Overall twisting	
	
Note:	No defects observed

Cores 4xAWG24	
	
Note:	No defects observed

Note:	The conductor showed no breaks or short circuits. The cable exhibited typical drag-chain wear on the outer jacket, shield, and foil. No abnormalities were observed on the inner jacket or the cores. The images show only a section of the dissection; the specimen was examined along its entire length.
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