



Spare Parts Catalog

6 WG 210

Material number: 4657.056.139

Current date: 29.05.2019

ZF Friedrichshafen AG
Hauptverwaltung
80038 Friedrichshafen
Deutschland

Telefon: +49 7541 77-0

Telefax: +49 7541 77-908000

www.zf.com

zuständiges Werk:
Passau

Notes relating to the spare parts catalog

Setup of the spare parts catalog

- Cover sheet
- Technical Cover (only in SDM print)
- Overview of figures
- Figure
- Associated parts list
- Next figure
- Associated parts list
- ...

Figure and parts list



Overview of figures

Bildtafel Figure	Sachnummer Product number	Benennung (Description)	Technische Info Technical info	Description (Benennung)	Menge Quantity	Einheit Unit
068.08.17	1316.170.001	AUSLEGER	WL	SHIFT TURRET	1	Stk
068.08.06	1316.170.031	DECKEL	WL*H-H *VM	COVER	1	Stk
068.08.14	1316.170.808	DECKEL	WL*AUSL+GEH*H-H*HF160N	COVER	1	Stk
08	1316.170.441	ANSCHLUSSTEILE	WL*NG-VORB*RG-SCHL*168N *BAJONETT	CONNECTING PARTS	1	Stk

The "gap" indicates that there is no separate graphics panel (poster) for this assembly
The parts of this assembly are shown with the same mid-section number on the figure

1 Positions and subpositions

Pos.	Sachnummer Product number	Benennung (Description)	Technische Info Technical info	Description (Benennung)	Menge Quantity	Einheit Unit
0370	1315.201.054	RUECKLAUFBOLZEN	KPL.16S151*SG*L= 79	REV.IDLER SHAFT	1	Stk
/0120	0631.329.293	SPANNSTIFT		SLOT. PIN	1	Stk

Positions marked with "/" are the individual items of a completion
For example: Position 0370 contains a centering pin with the position /0120

2 Combinations with standardized parts

Pos.	Sachnummer Product number	Benennung (Description)	Technische Info Technical info	Description (Benennung)	Menge Quantity	Einheit Unit
0630		VERSCHL.SCHR.		SCREW PLUG	1	Stk
	0636.302.067	VERSCHL.SCHR.		SCREW PLUG	1	Stk
	0634.801.249	DICHTRING	A 26 X 31	SEALING RING	1	Stk

The parts list shows the components included in the combination of standardized parts

3 Depiction of position/item number on the figure and in the parts list

01.620 - on the figure 01 relates to the assembly in which the position is included. Due to program-related reasons, it is shown on the figure.

0620 - in the parts list

Pos.	Sachnummer Product number	Benennung (Description)	Technische Info Technical info	Description (Benennung)	Menge Quantity	Einheit Unit
0620	0732.040.736	DRUCKFEDER		COMPRESSION SPRING	1	Stk

4 *-Positions

Positions marked with an * are optional i.e. inclusion in the parts list is not mandatory.
The following note is shown on the figure

je nach Stücklistenausführung
depending on spec. number
*
suivant la nomenclature
secondo la distinta base

5 Parts, dotted display

Parts with dotted display on the figure are only used for orientation of other parts

Technical Cover

Page 1 from 4

Material number: 4657.056.139



6 WG 210 /

Pos.	Information	Amendment number
	CUSTOMER: DORMASCH	
	STATE: RUSSIA	
	VEHICLE DATA: -----	
	VEHICLE APPLICATION: GRADER DZ 298	
	WEIGHT LOADED (TO): 24	
	ENGINE: DEUTZ BF61013ECP	
	ENGINE POWER(KW): 182	
	SPEED (RPM): 2100	
	INPUT TORQUE(NM): 897	
	SPEED (RPM): 1500	
	TIRES: 20,5-25	
	TIRE RADIUS (M): 0.677	
	AXLE RATIO: 19,460	
	MAX. SPEED (KM/H): 44	
	2.DRIVING PERFORM.CALC.:4657.707.653	
	VEHICLE APPLICATION: GRADER	
	WEIGHT LOADED (TO): 24	
	ENGINE: DEUTZ BF6M 1013 FC	
	ENGINE POWER(KW): 199,9	
	SPEED (RPM): 2300	
	INPUT TORQUE(NM): 1050	
	SPEED (RPM): 1600	
	TIRES: 16,00-24	
	TIRE RADIUS (M): 0,680	
	AXLE RATIO: 19,460	
	MAX. SPEED (KM/H): 47,3	
	PRODUCT DESCRIPTION: ZF-ERGOPOWER TRANSMISSION	
	TRANSMISSION TYPE 6 WG 210	
	DROP CENTER DISTANCE: 540 MM	
	VEHICLE: GRADER	
	VERSION STANDARD	
	1. GEAR FORWARD: 5,562	
	2. GEAR FORWARD: 3,615	

Technical Cover

Page 2 from 4

Material number: 4657.056.139



6 WG 210 /

Pos.	Information	Amendment number
	3. GEAR FORWARD: 2,255	
	4. GEAR FORWARD: 1,466	
	5. GEAR FORWARD: 0,942	
	6. GEAR FORWARD: 0,613	
	1. GEAR REVERSE: 5,274	
	2. GEAR REVERSE: 2,138	
	3. GEAR REVERSE: 0,894	
	NUMBER OF PULSES ENGIN: 4	
	NUMBER OF PULSES TURB: 54	
	NUMBER OF PULSES MRK: 55	
	NUMBER OF PULSES OUTP.: 46	
	CONVERTER: W 340	
	CONVERTER PART NR: 4168 034 117	
	LOCK-UP CLUTCH: WITHOUT	
	TORQUE CONVERTER ABSORP 271 NM	
	STALL TORQUE RATIO: 1,77	
	STATOR FREEWHEEL: WITHOUT	
	RETARDER: WITHOUT	
	ENGINE INPUT: DIRECT MOUNTED TO ENGINE 4657 500 242	
	ENGINE: DEUTZ	
	ENGINE-CONNECTION: SAE 3	
	OUTPUT: STANDARD	
	OUTPUT CONVERTER SIDE: WITHOUT AXLE DISCONNECT	
	OUTPUT FLANGECONVERTER DIN	
	OUTPUT FLANGE TYPE: DIN 150	
	SCREW: 8 X M12 X 45	
	OUTPUT PTO SIDE: WITH PARKING BRAKE	
	DISC BRAKE: SAHR FSG 88	
	CONNECTION BRAKE M 10 X 1	
	RELEASE PRESSURE: 120 - 150 BAR	
	MEDIUM: HYDRAULIK OIL DIN 51525	
	OUTPUT FLANGE PTO SIDE DIN	
	OUTPUT FLANGE-TYPE: DIN 150	



Pos.	Information	Amendment number
	SCREWS: 8 X M12 X 40	
	POWER TAKE OFF: 1 PTO COAXIAL ENGINE-DEPENDEN	
	DISCONNECTION: WITHOUT	
	FLANGE: SAE C 2/4 HOLE	
	DRIVER / PROFILE: SAE C 12/24 DP 14 T	
	GEAR CHANGE CONTROL: ZF-ERGOSHIFT/ PROP VALVE	
	VOLTAGE: 24 VOLT	
	OPERATING PRESSURE: 16+2 BAR	
	CABLE CONNECT. TO EST 3 BAYONET	
	CONTROL SYSTEM: -----	
	ELECTRIC PARTS ORDER: INCLUDED IN SCOPE OF SUPPLY	
	GROUP LOOSE PARTS: 4657.183.163	
	SEPERATE ORDER: WITHOUT	
	CONTROL UNIT: EST 37A	
	VEHICLE SUPPLY VOLTAGE: 24 VOLT	
	GEAR SELECTOR: DW 3	
	DISPLAY: FOR SEPERATE MOUNTING	
	WIRING: WITH	
	OIL TEMPERATURE SENSOR: WITH (WITHOUT GAUGE)	
	SPEED CONTROL: CONNECTION VIA EST	
	OIL LEVEL TUBE: MOUNTED ON CONVERTER SIDE	
	OIL DIPSTICK: SHORT/STRAIGHT	
	DELIVERY OIL LEV. TUBE: ASSEMBLED	
	FILTER INSTALLATION: DIRECT MOUNTED	
	ADDITIONAL FILTER WITHOUT	
	PRES. DROP SWITCH: CLOSING SWITCH	
	EMERGENCY STEERING PUMP MOUNTING POSSIBILITY	
	GEARBOX BREATHER: WITH	
	DOCUMENTATION GEAR BOX: -----	
	SECTION DRAWING: 4657 500 092	
	GEARBOX DIAGRAM: 4657 700 043	
	OIL CIRCUIT DIAGRAMM: 4657 700 144	
	DOCU. CONTROL UNIT: -----	

Technical Cover

Page 4 from 4

Material number: 4657.056.139



6 WG 210 /

Pos.	Information	Amendment number
	DRAWING 6009.665.002	
	DRAWING GEAR SEL. 1: 6006.630.026	
	CONNECTION DIAGRAMM: 6006.700.582	
	WIRING DIAGRAMM: 6029.701.965	
	CONNECTION DIAGRAMM: 6029.701.966	
	DRAWING DISPLAY: 6007.603.047	
	OIL CAPACITY: 27	
	GEARBOX OIL CAPACITY: WITHOUT	
	OIL-CLASS: TE ML 03	
	PRIME CODE: RAL-3009	
	INSTAL. INSTRUCTIONS: 0000 702 271	
	INSTALLATION DRAWING: 4657 656 139	
	1.PERFORMANCE CALC.: 4657 707 017	

Assembly group overview

Page 1 from 2



6 WG 210 /

Material number: 4657.056.139

Graphics	Pos.	Material number	Name	Quantity	Amend. no.	Techn. Info.
4657130074 00	270	4657.130.074	ENGINE CONNECTION	1		
4166034080 00	500	4166.034.080	CONVERTER	1		
4657102030 00	30	4657.102.030	INPUT	1		
4657101082 01	10	4657.101.082	TRANSMISSION HOUSING	1		
4657101408 00	20	4657.101.408	TRANSMISSION HOUSING	1		
4143139001 00	15	4143.139.001	TYPE PLATE	1		
4657171030 00	350	4657.171.030	COUPLING	1		
4657172027 00	360	4657.172.027	COUPLING	1		
4657173029 00	370	4657.173.029	COUPLING	1		
4657174038 00	380	4657.174.038	COUPLING	1		
4657175014 00	390	4657.175.014	COUPLING	1		
4657176017 00	400	4657.176.017	COUPLING	1		
4657103010 00	50	4657.103.010	OUTPUT	1		
4657103427 00	60	4657.103.427	OUTPUT	1		
4656109018 00	170	4656.109.018	PARKING BRAKE	1		
4657109418 00	70	4657.109.418	PARKING BRAKE	1		

Assembly group overview

Page 2 from 2



6 WG 210 /

Material number: 4657.056.139

Graphics	Pos.	Material number	Name	Quantity	Amend. no.	Techn. Info.
465715400400	340	4657.154.004	POWER TAKE-OFF	1		
465710601200	110	4657.106.012	SHIFT SYSTEM	1		
465710640720	115	4657.106.407	SHIFT SYSTEM	1		
465615901921	120	4656.159.019	SHIFT SYSTEM	1		
465712300300	225	4657.123.003	CONTROL UNIT	1		
465612000300	190	4656.120.003	PRESSURE REGULATOR	1		
465712200500	220	4657.122.005	PRESSURE OIL PUMP	1		
465613700400	310	4656.137.004	EMERGENCY STEERING PUMP	1		
465710700300	130	4657.107.003	SPEEDOMETER	1		
465712500200	250	4657.125.002	INDUCTIVE SENSOR	1		
465712400300	240	4657.124.003	TEMPERATURE SENSOR	1		
465613801500	330	4656.138.015	FILTER	1		
465713100400	290	4657.131.004	FILLER NOZZLE	1		
465718329800	495	4657.183.298	LOOSE PARTS	1		

Plant

Page 1 from 1

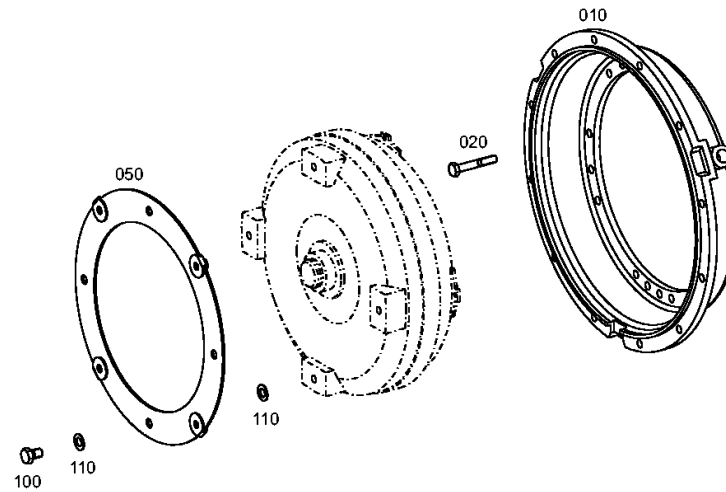
Material number: 4657.056.139

Plant: 465713007400

Material-assembly-group-no: 4657.130.074



6 WG 210 /
ENGINE CONNECTION



Plant

Page 1 from 1

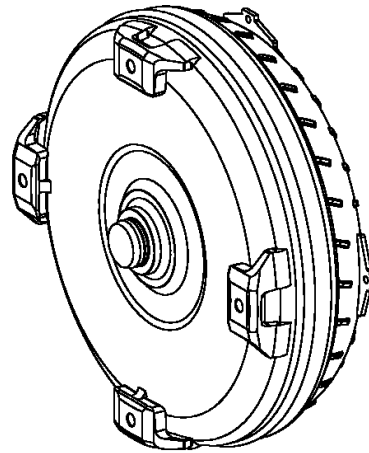
Material number: 4657.056.139

Plant: 416603408000

Material-assembly-group-no: 4166.034.080



6 WG 210 /
CONVERTER



010

Plant

Page 1 from 1

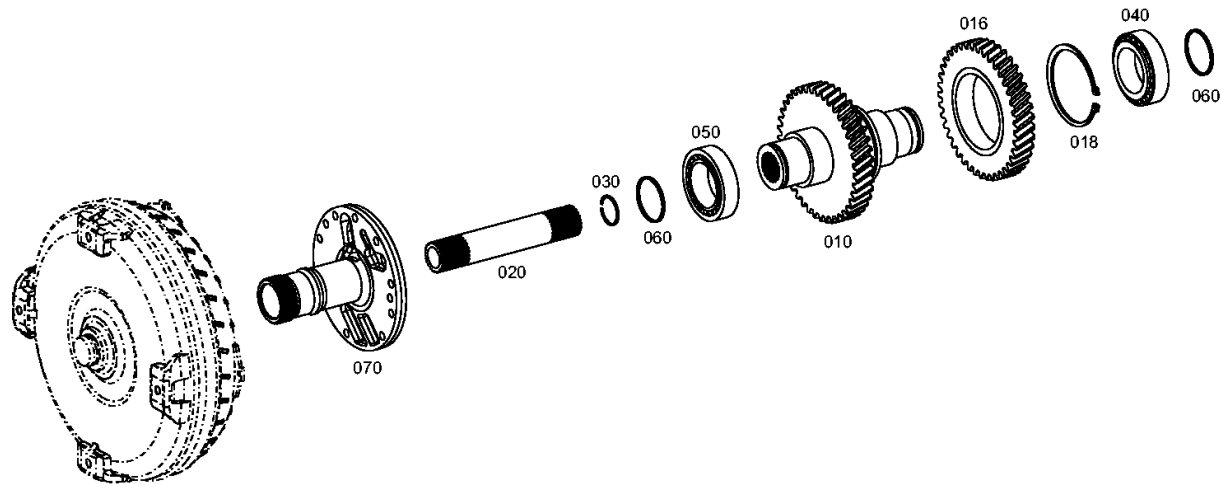
Material number: 4657.056.139

Plant: 465710203000

Material-assembly-group-no: 4657.102.030



6 WG 210 /
INPUT



Plant

Page 1 from 2

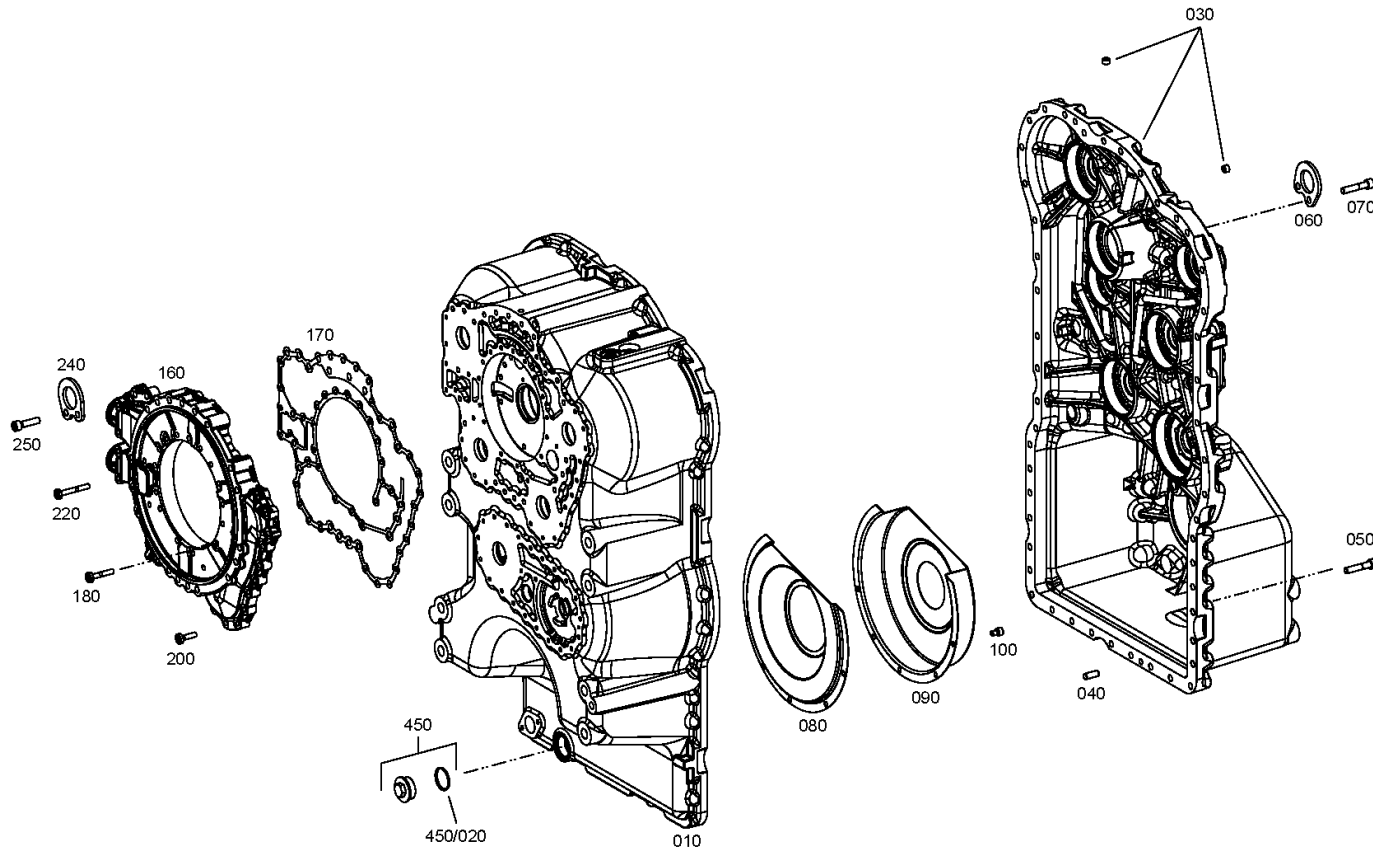
Material number: 4657.056.139

Plant: 465710108201

Material-assembly-group-no: 4657.101.082



6 WG 210 /
TRANSMISSION HOUSING



Plant

Page 2 from 2

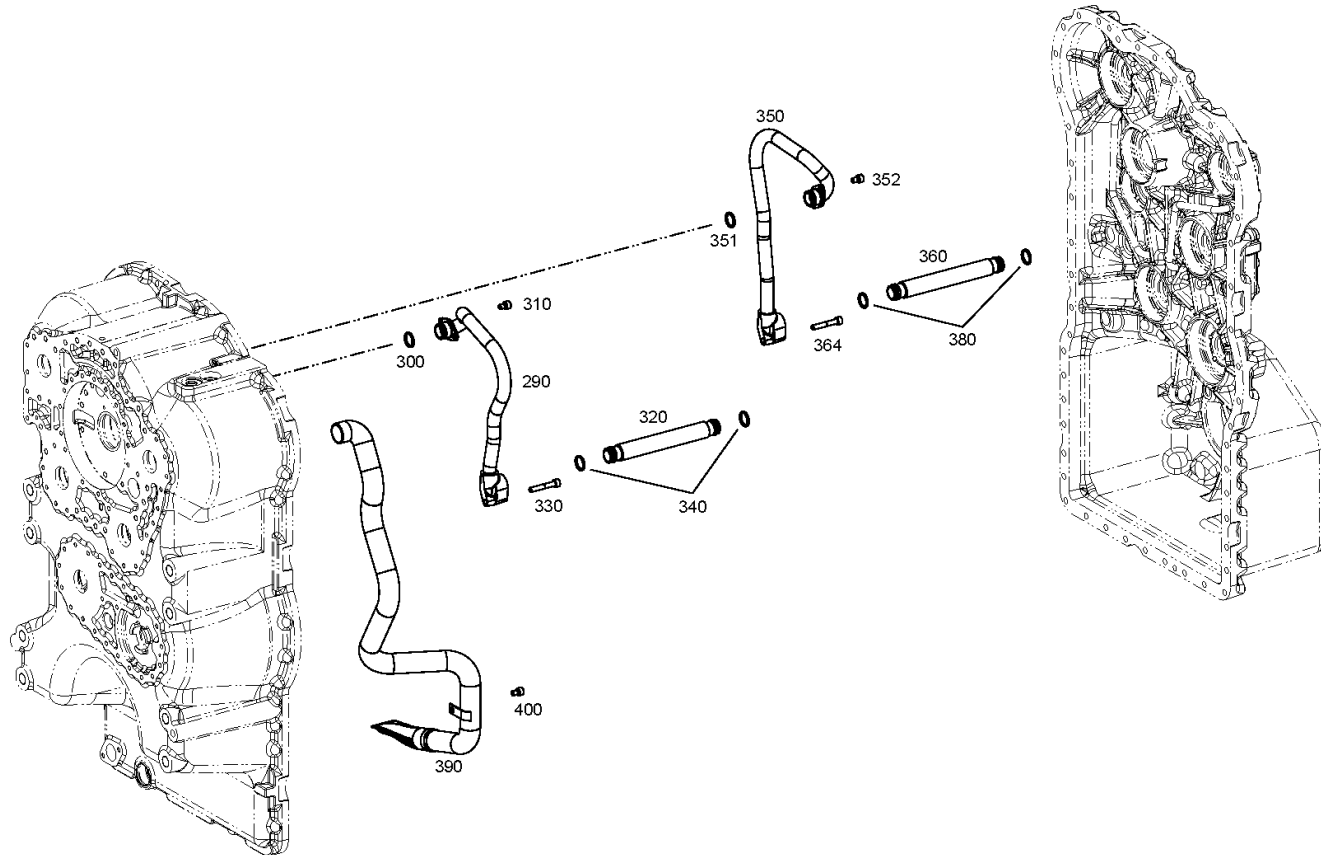
Material number: 4657.056.139

Plant: 465710108202

Material-assembly-group-no: 4657.101.082



6 WG 210 /
TRANSMISSION HOUSING



Plant

Page 1 from 1

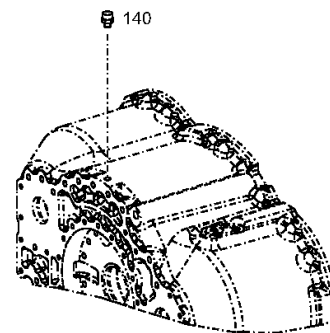
Material number: 4657.056.139

Plant: 465710140800

Material-assembly-group-no: 4657.101.408



6 WG 210 /
TRANSMISSION HOUSING



Plant

Page 1 from 1

Material number: 4657.056.139

Plant: 414313900100

Material-assembly-group-no: 4143.139.001



6 WG 210 /
TYPE PLATE



010

Plant

Page 1 from 1

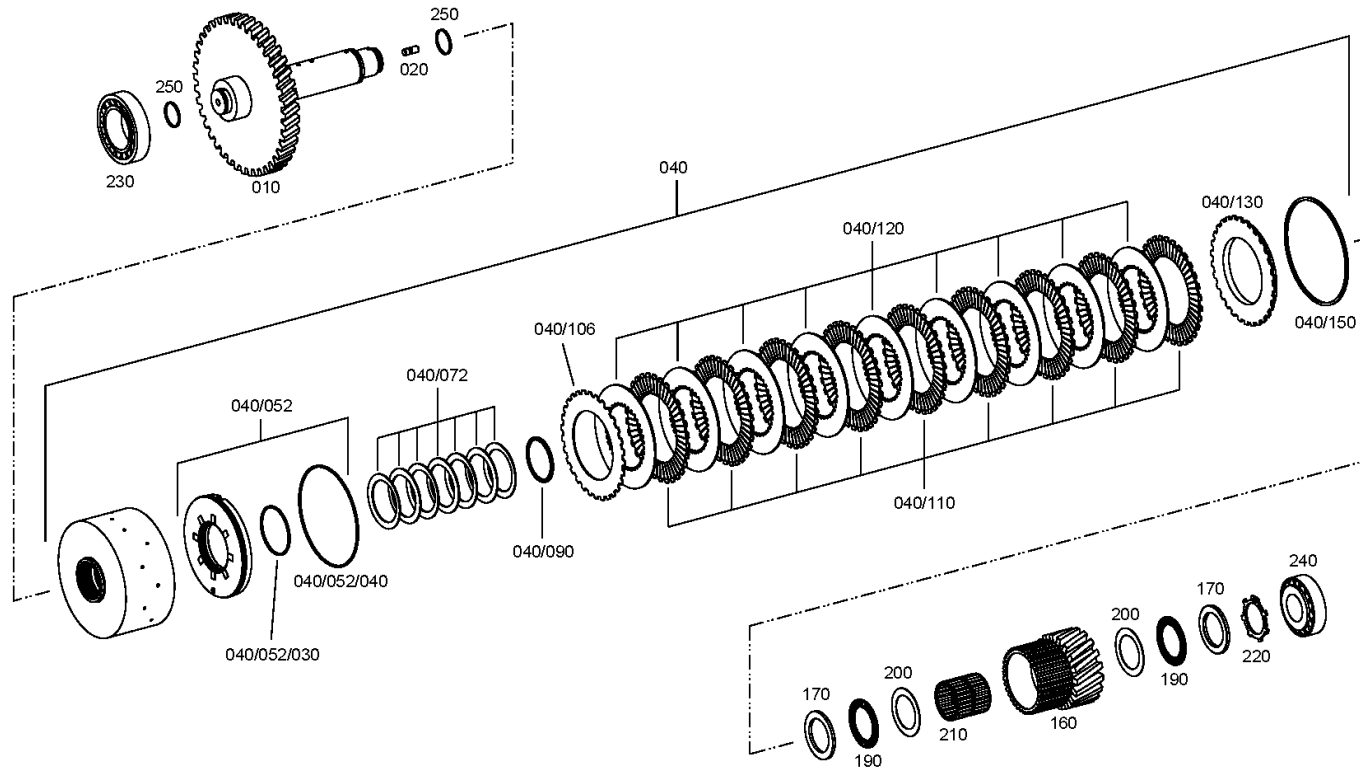
Material number: 4657.056.139

Plant: 465717103000

Material-assembly-group-no: 4657.171.030



6 WG 210 /
COUPLING



Plant

Page 1 from 1

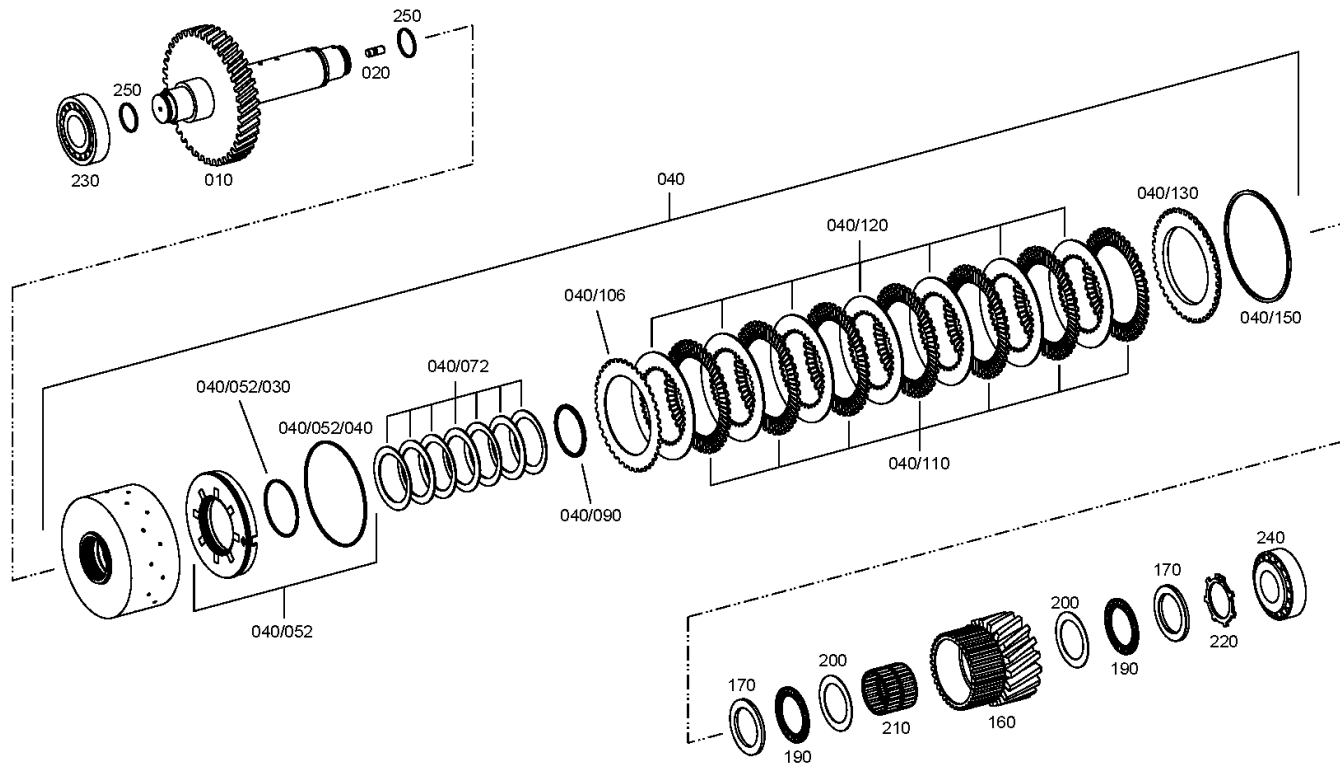
Material number: 4657.056.139

Plant: 465717202700

Material-assembly-group-no: 4657.172.027



6 WG 210 /
COUPLING



Plant

Page 1 from 1

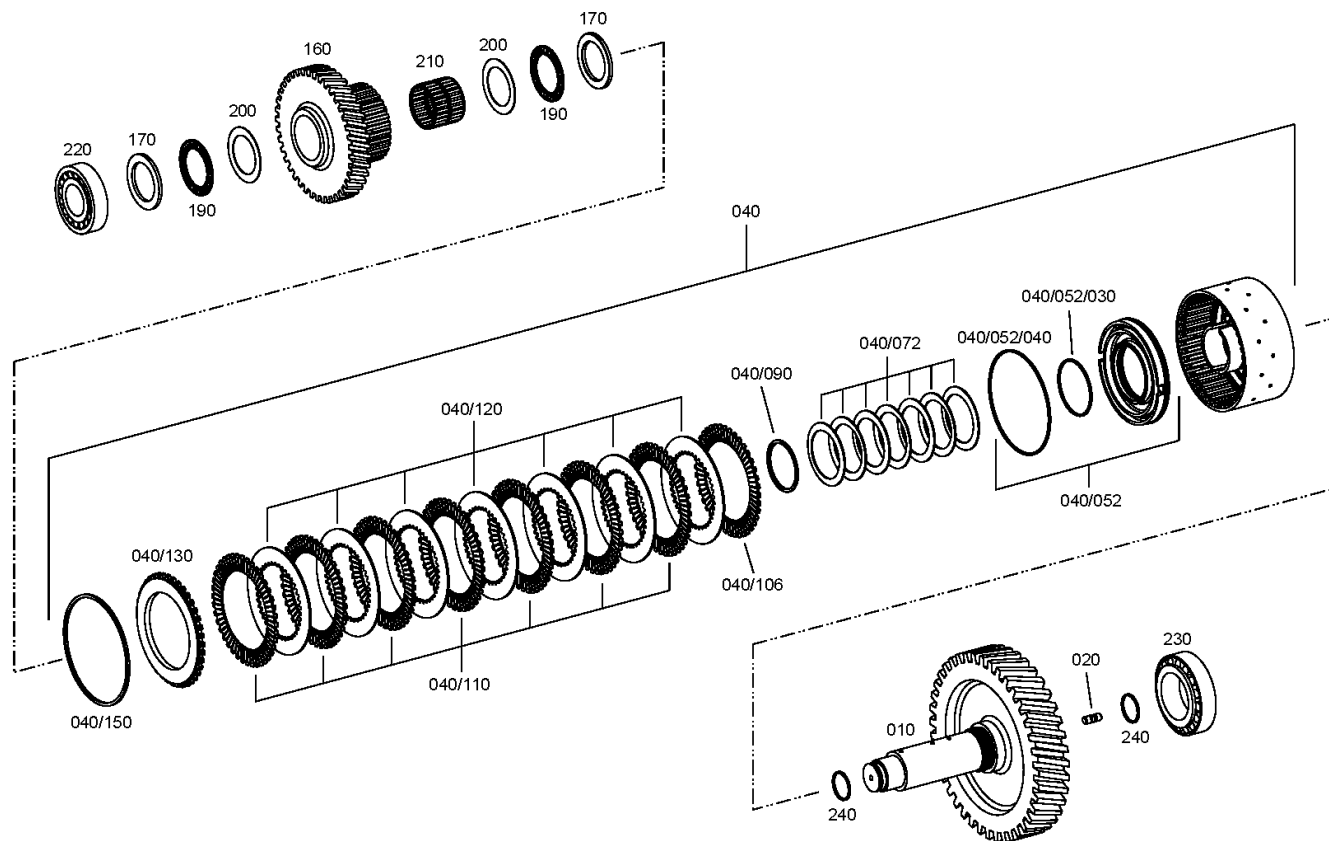
Material number: 4657.056.139

Plant: 465717302900

Material-assembly-group-no: 4657.173.029



6 WG 210 /
COUPLING



Plant

Page 1 from 1

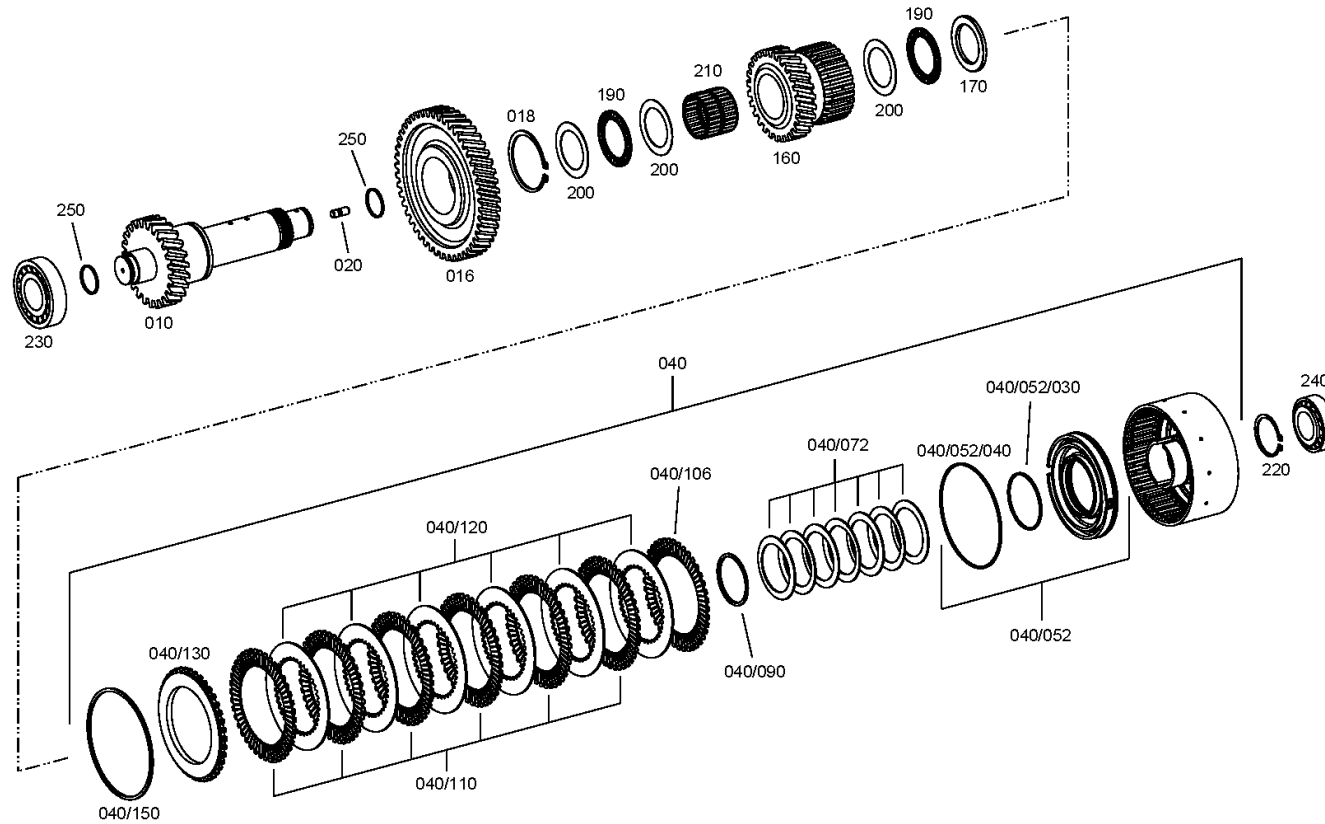
Material number: 4657.056.139

Plant: 465717403800

Material-assembly-group-no: 4657.174.038



6 WG 210 /
COUPLING



Plant

Page 1 from 1

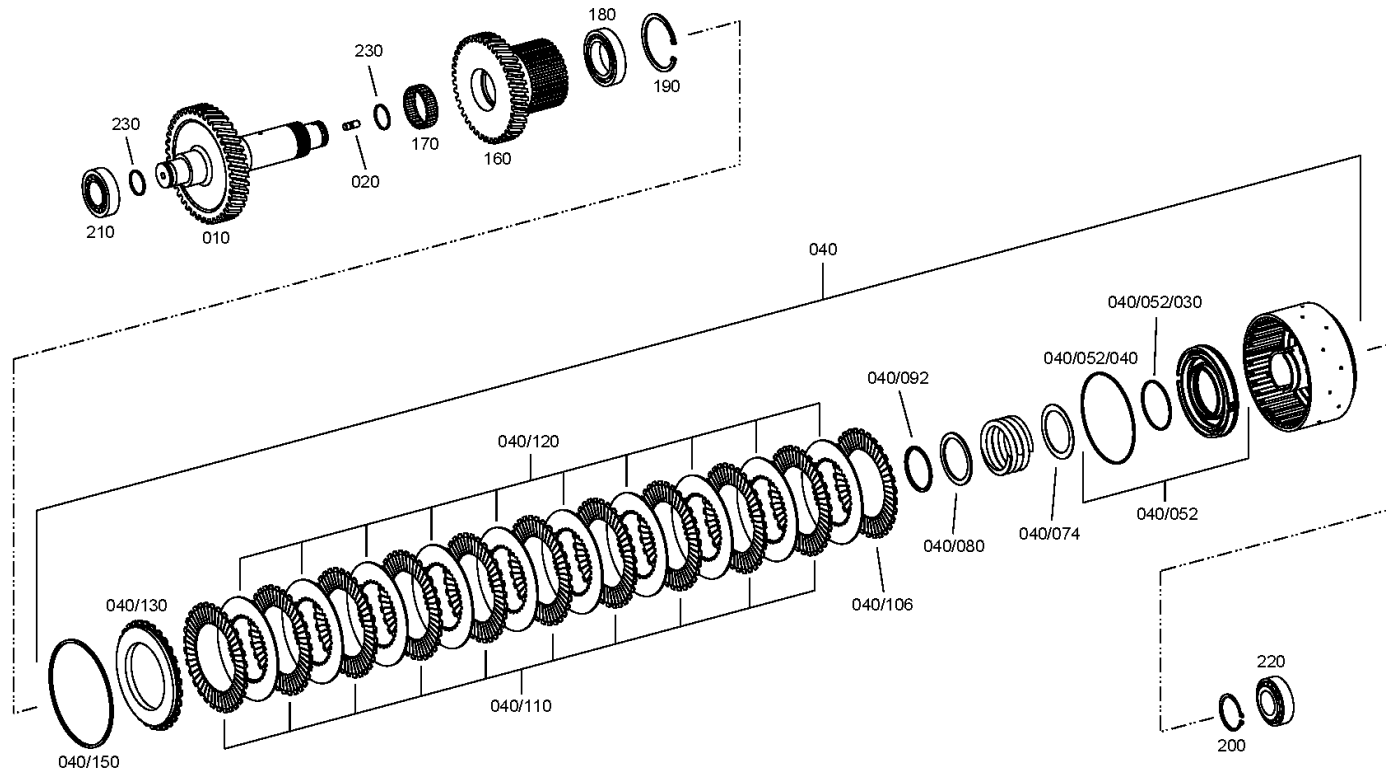
Material number: 4657.056.139

Plant: 465717501400

Material-assembly-group-no: 4657.175.014



6 WG 210 /
COUPLING



Plant

Page 1 from 1

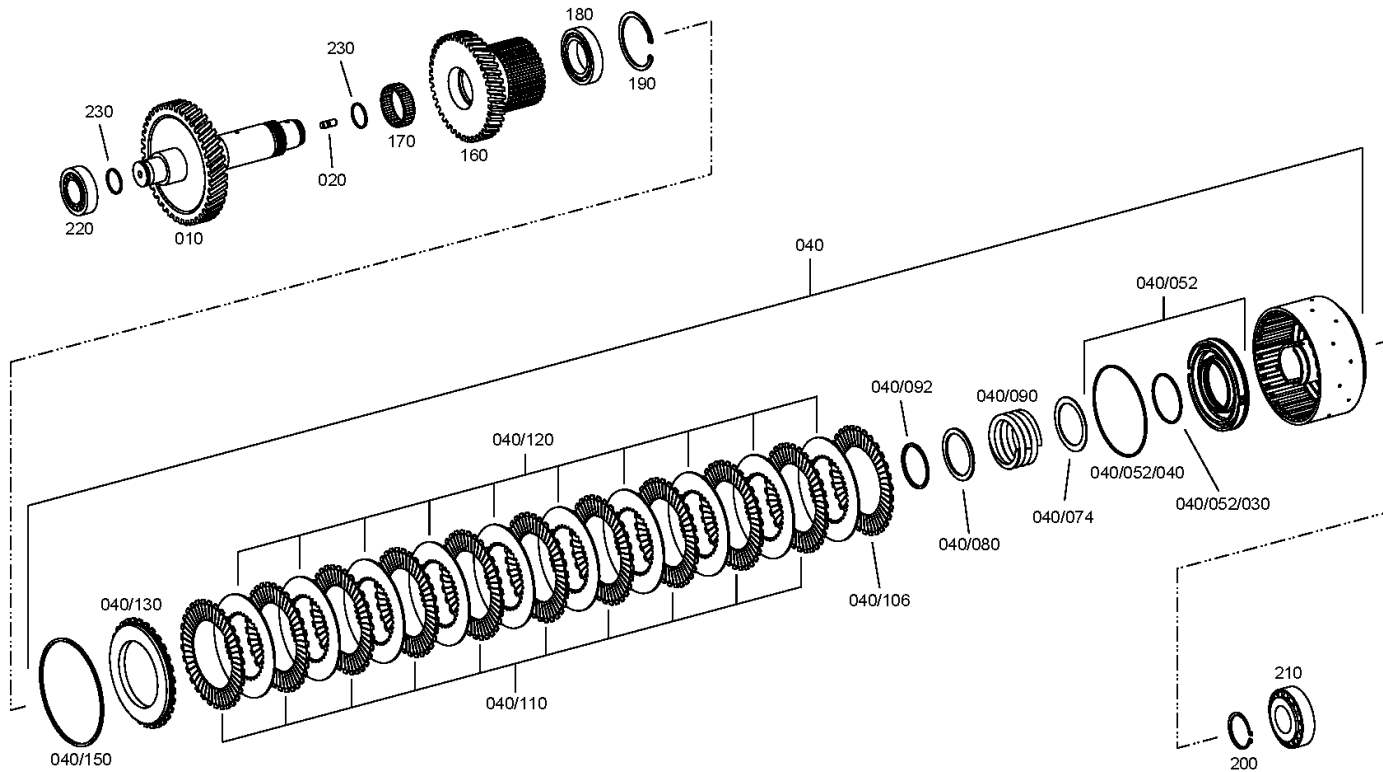
Material number: 4657.056.139

Plant: 465717601700

Material-assembly-group-no: 4657.176.017



6 WG 210 /
COUPLING



Plant

Page 1 from 1

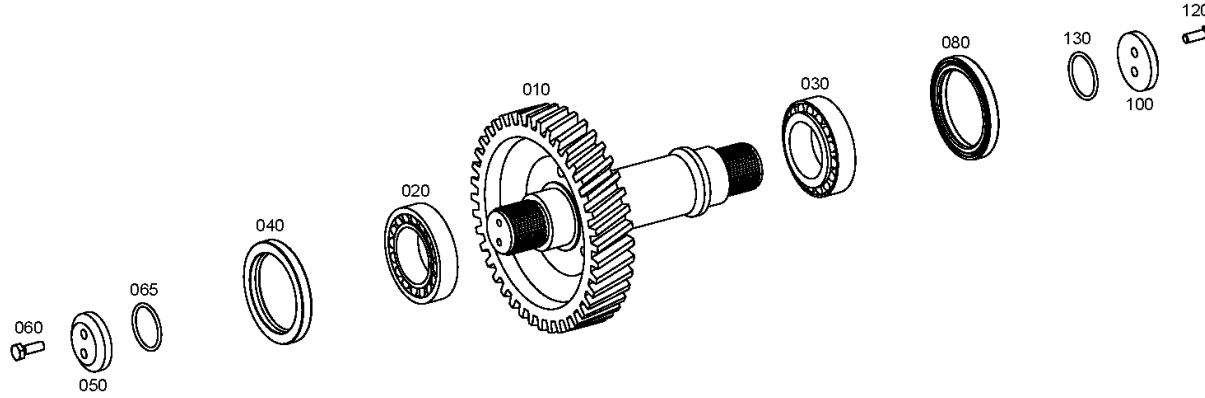
Material number: 4657.056.139

Plant: 465710301000

Material-assembly-group-no: 4657.103.010



6 WG 210 /
OUTPUT



Plant

Page 1 from 1

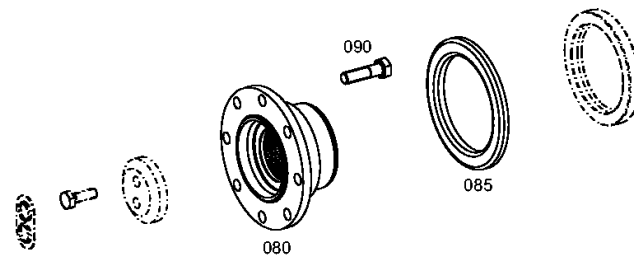
Material number: 4657.056.139

Plant: 465710342700

Material-assembly-group-no: 4657.103.427



6 WG 210 /
OUTPUT



Plant

Page 1 from 1

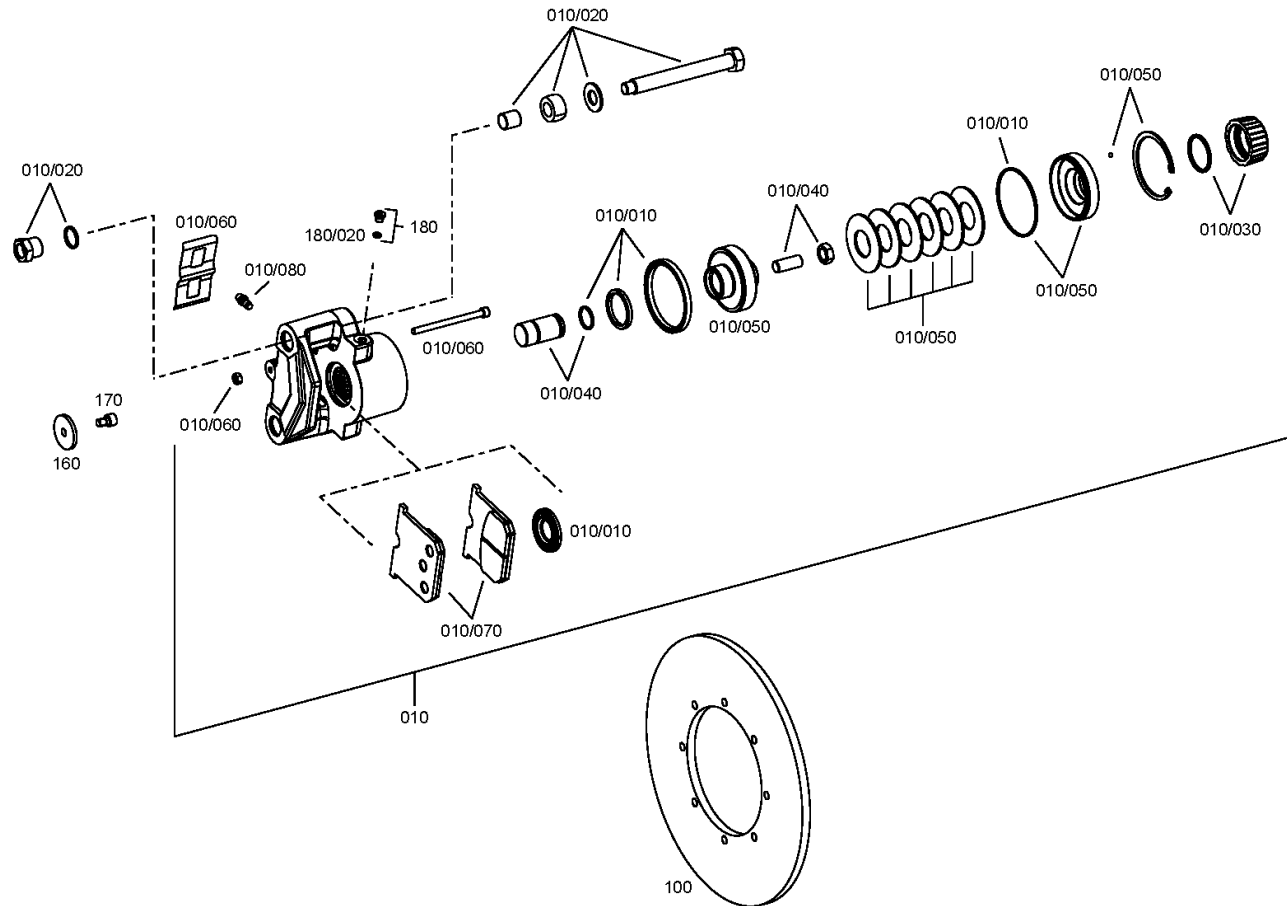
Material number: 4657.056.139

Plant: 465610901800

Material-assembly-group-no: 4656.109.018



6 WG 210 /
PARKING BRAKE



Plant

Page 1 from 1

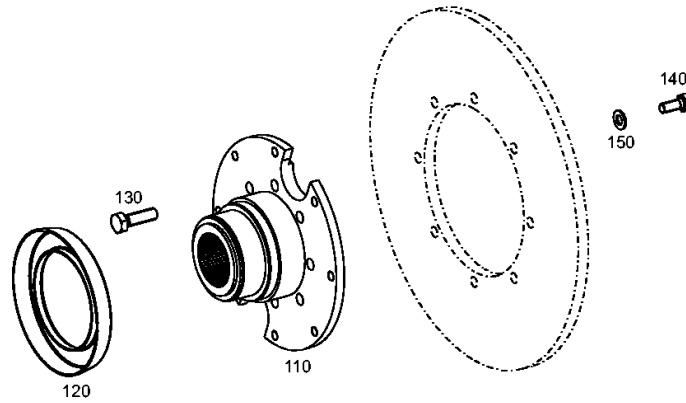
Material number: 4657.056.139

Plant: 465710941800

Material-assembly-group-no: 4657.109.418



6 WG 210 /
PARKING BRAKE



Plant

Page 1 from 1

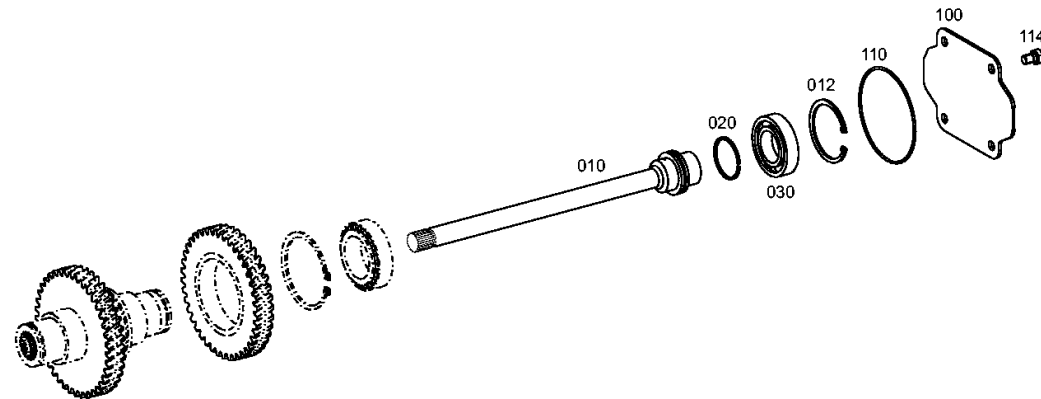
Material number: 4657.056.139

Plant: 465715400400

Material-assembly-group-no: 4657.154.004



6 WG 210 /
POWER TAKE-OFF



Plant

Page 1 from 2

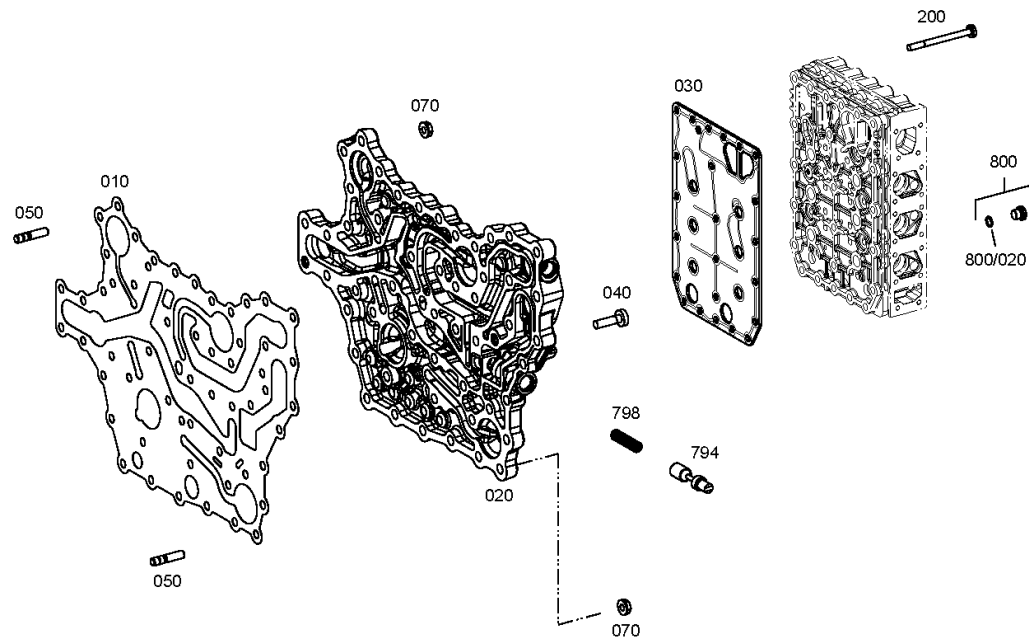
Material number: 4657.056.139

Plant: 465710601200

Material-assembly-group-no: 4657.106.012



6 WG 210 /
SHIFT SYSTEM



Plant

Page 2 from 2

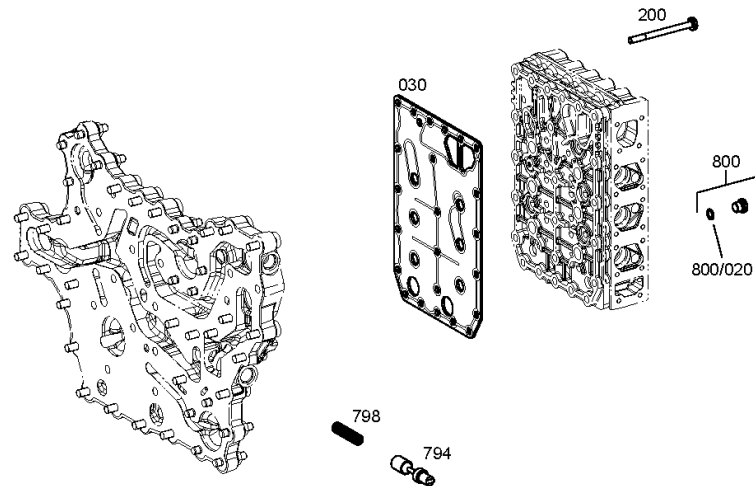
Material number: 4657.056.139

Plant: 465710601280

Material-assembly-group-no: 4657.106.012



6 WG 210 /
SHIFT SYSTEM



Plant

Page 1 from 1

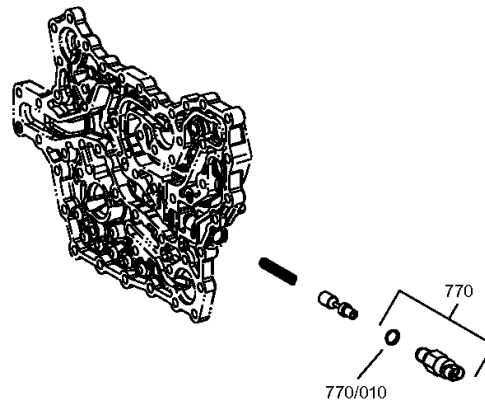
Material number: 4657.056.139

Plant: 465710640720

Material-assembly-group-no: 4657.106.407



6 WG 210 /
SHIFT SYSTEM



Plant

Page 1 from 2

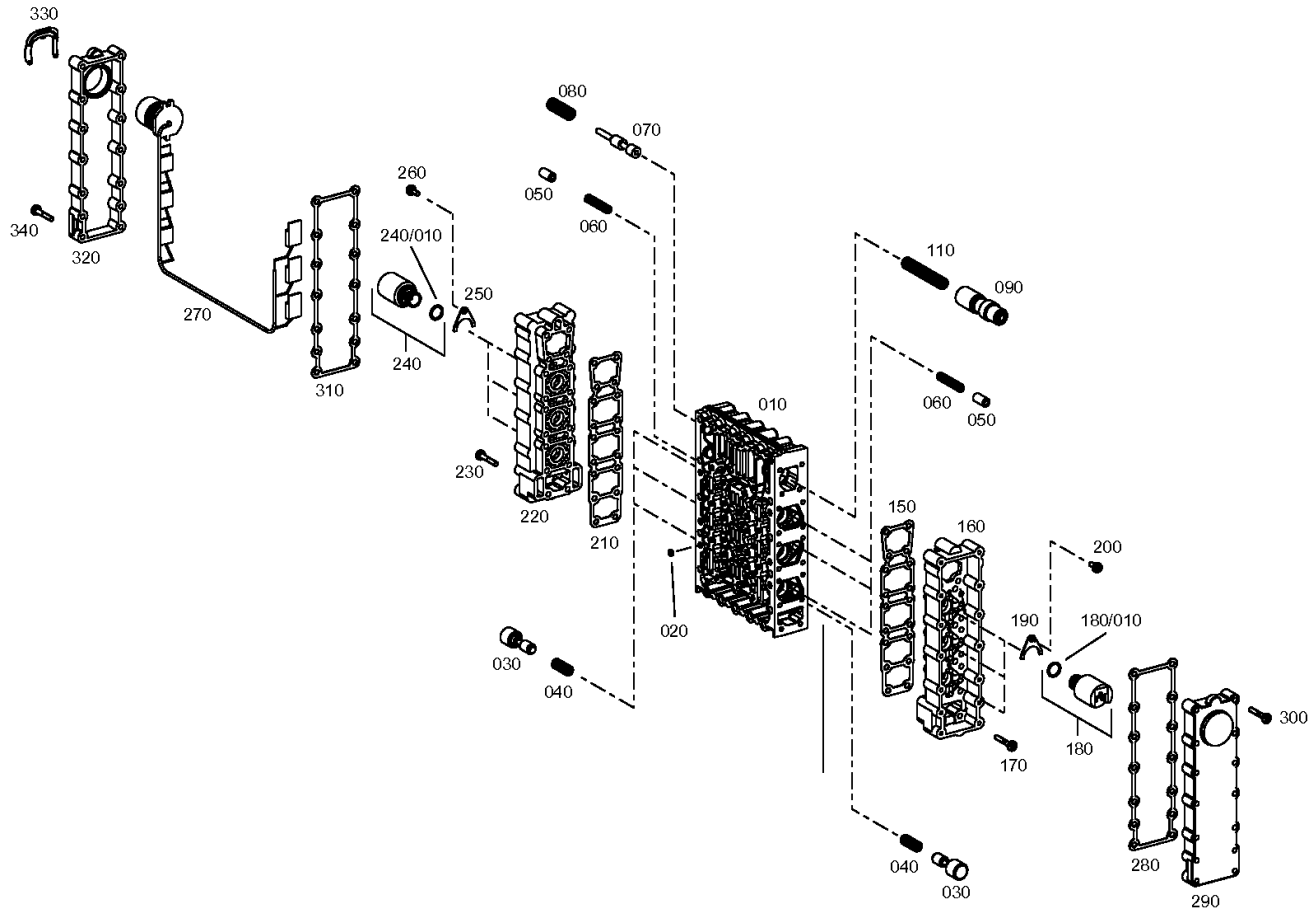
Material number: 4657.056.139

Plant: 465615901921

Material-assembly-group-no: 4656.159.019



6 WG 210 /
SHIFT SYSTEM



Plant

Page 2 from 2

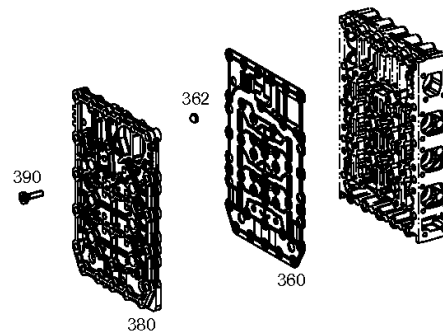
Material number: 4657.056.139

Plant: 465615901922

Material-assembly-group-no: 4656.159.019



6 WG 210 /
SHIFT SYSTEM



Plant

Page 1 from 1

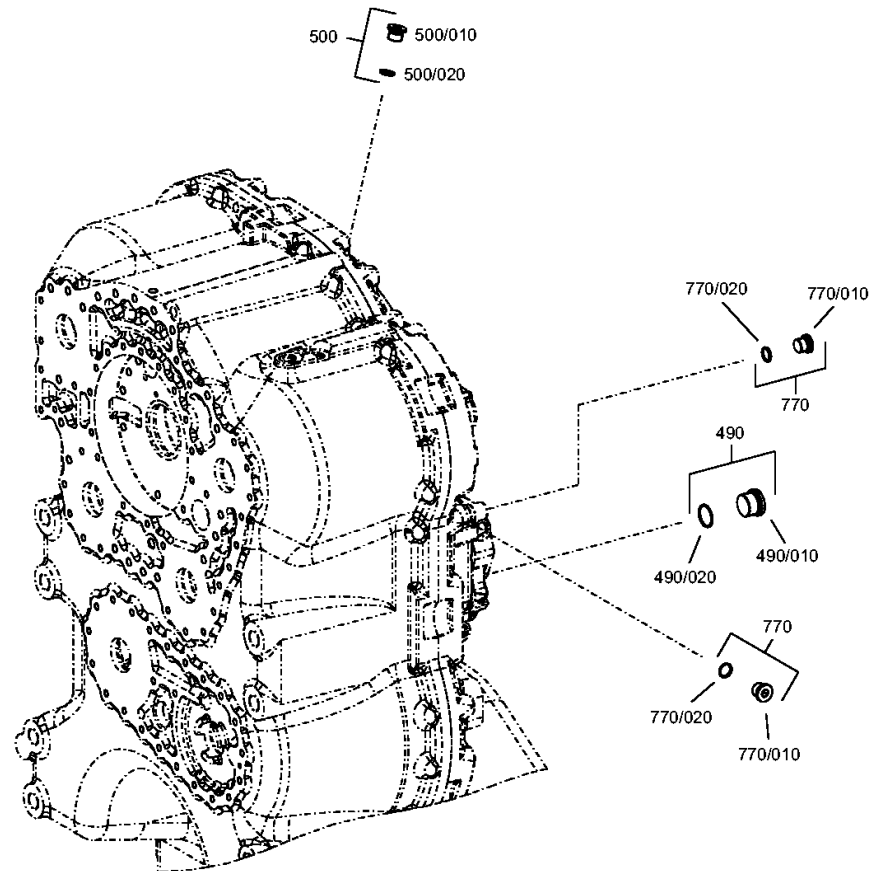
Material number: 4657.056.139

Plant: 465712300300

Material-assembly-group-no: 4657.123.003



6 WG 210 /
CONTROL UNIT



Plant

Page 1 from 1

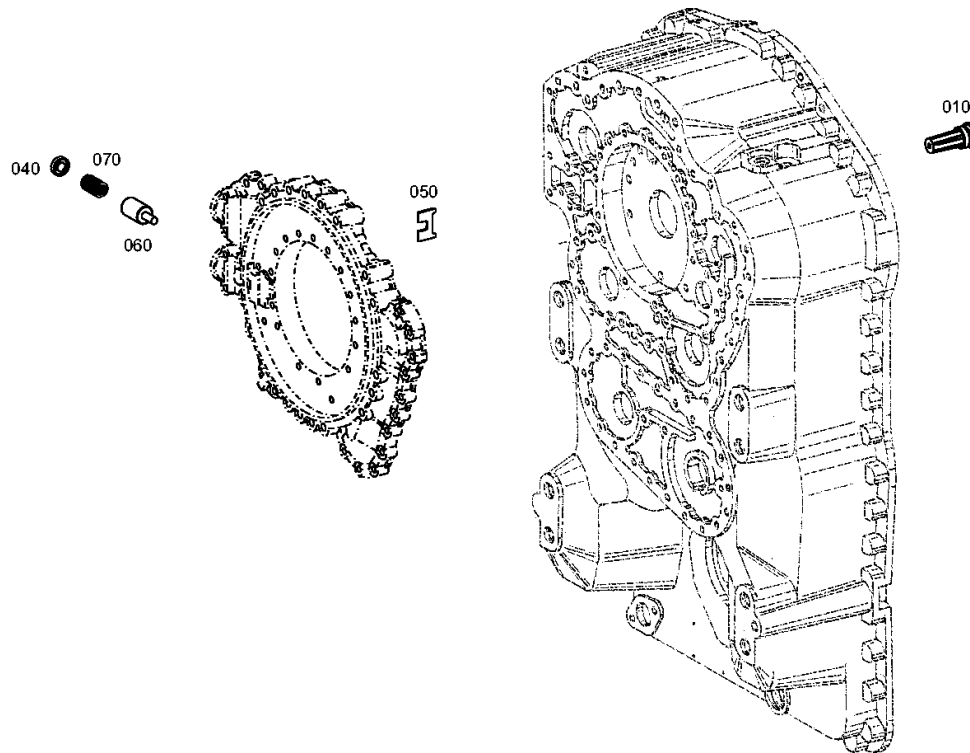
Material number: 4657.056.139

Plant: 465612000300

Material-assembly-group-no: 4656.120.003



6 WG 210 /
PRESSURE REGULATOR



Plant

Page 1 from 1

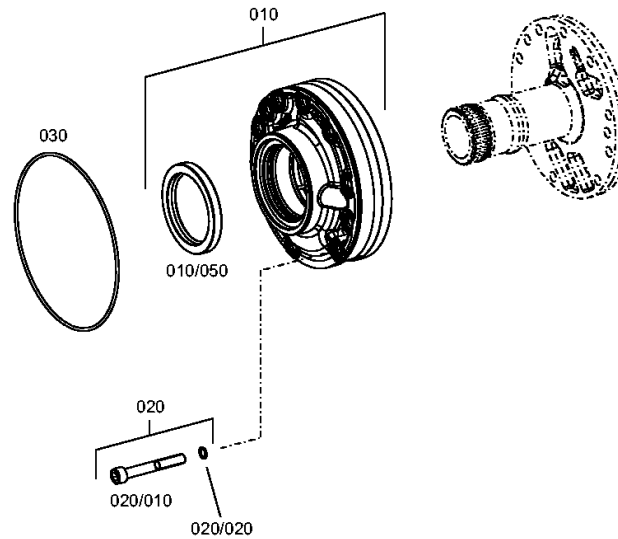
Material number: 4657.056.139

Plant: 465712200500

Material-assembly-group-no: 4657.122.005



6 WG 210 /
PRESSURE OIL PUMP



Plant

Page 1 from 1

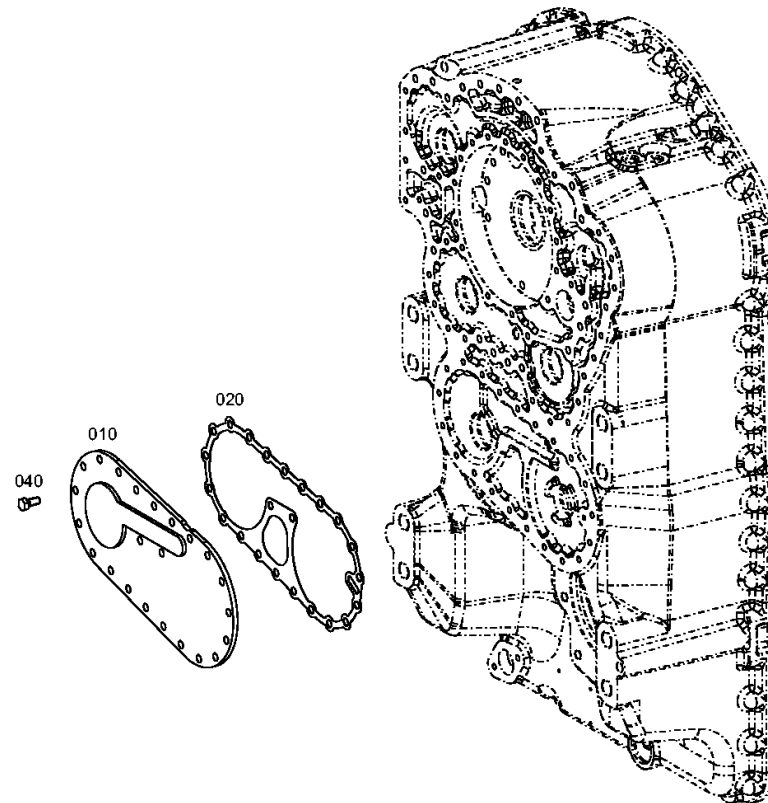
Material number: 4657.056.139

Plant: 465613700400

Material-assembly-group-no: 4656.137.004



6 WG 210 /
EMERGENCY STEERING PUMP



Plant

Page 1 from 1

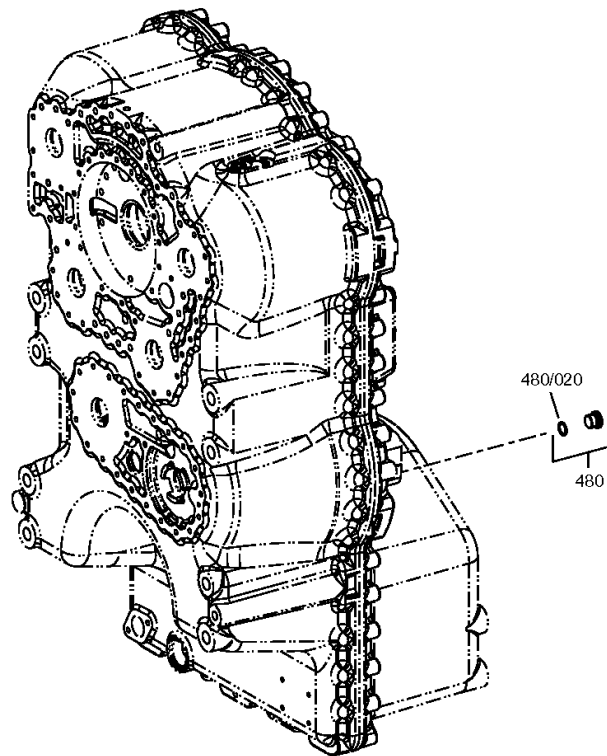
Material number: 4657.056.139

Plant: 465710700300

Material-assembly-group-no: 4657.107.003



6 WG 210 /
SPEEDOMETER



Plant

Page 1 from 1

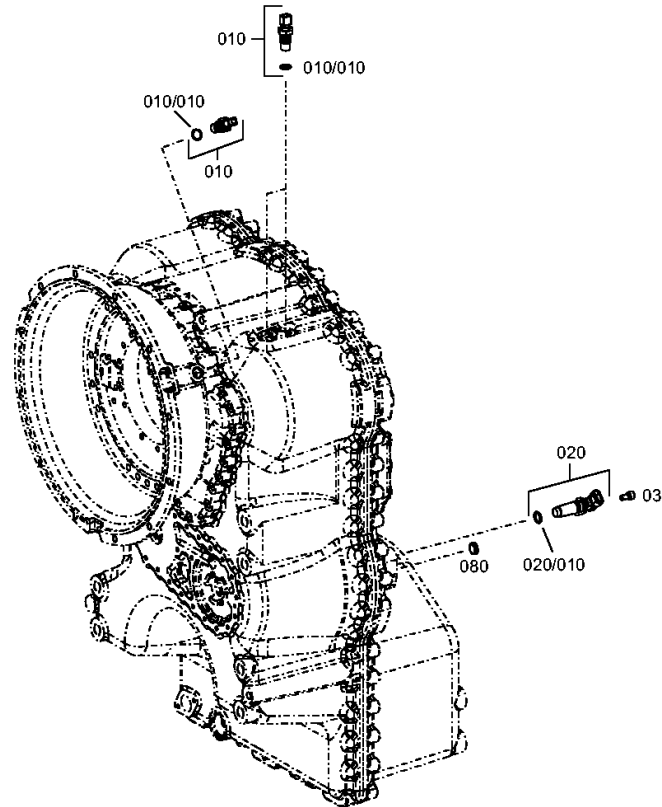
Material number: 4657.056.139

Plant: 465712500200

Material-assembly-group-no: 4657.125.002



6 WG 210 /
INDUCTIVE SENSOR



Plant

Page 1 from 1

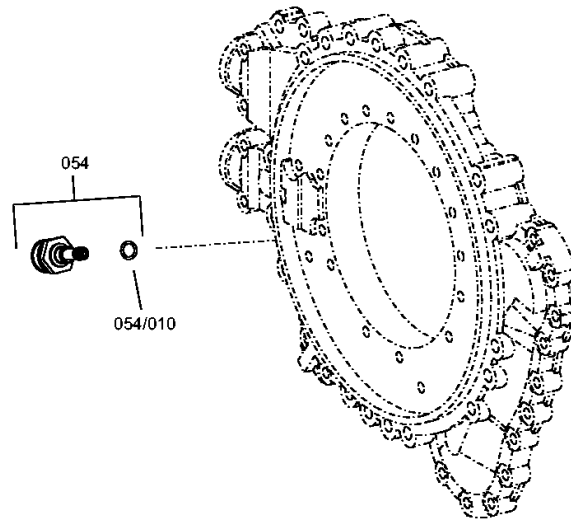
Material number: 4657.056.139

Plant: 465712400300

Material-assembly-group-no: 4657.124.003



6 WG 210 /
TEMPERATURE SENSOR



Plant

Page 1 from 1

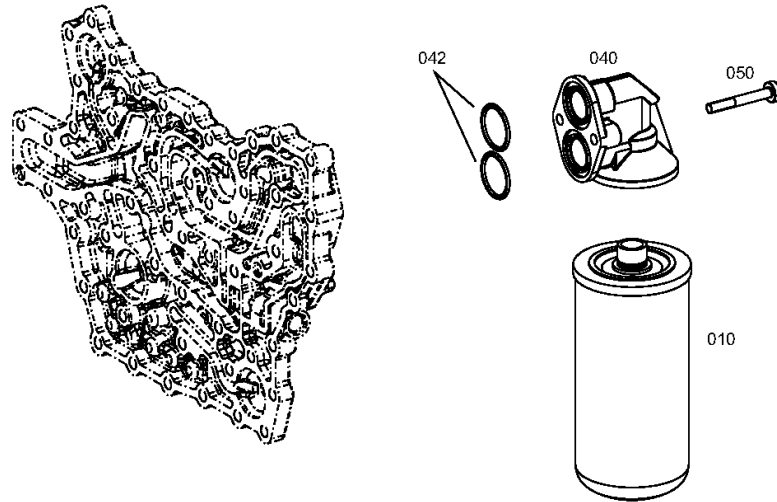
Material number: 4657.056.139

Plant: 465613801500

Material-assembly-group-no: 4656.138.015



6 WG 210 /
FILTER



Plant

Page 1 from 1

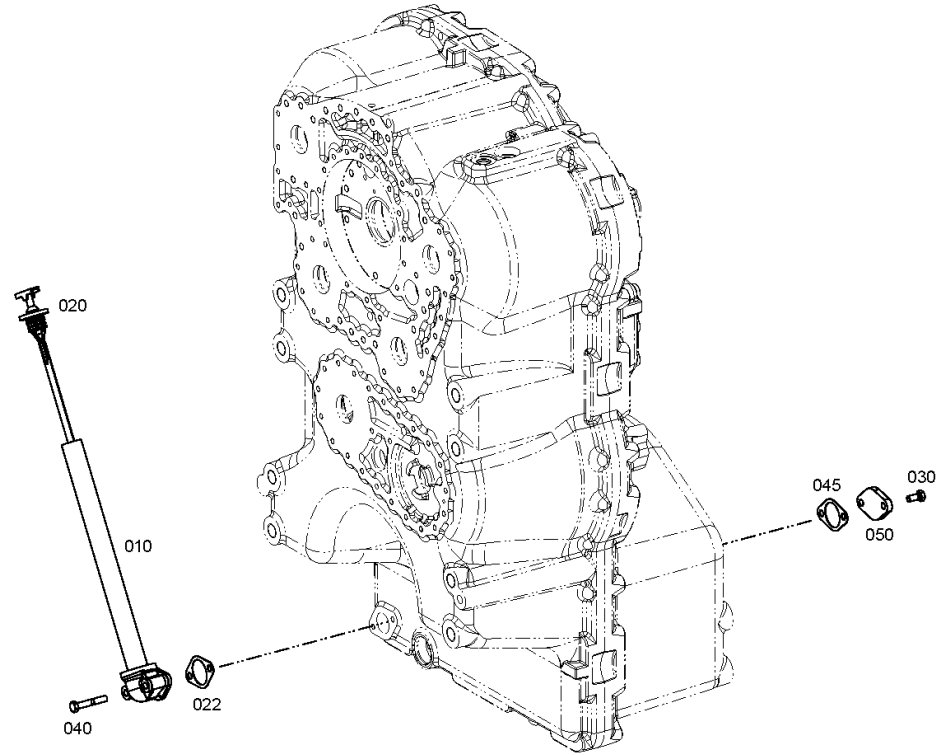
Material number: 4657.056.139

Plant: 465713100400

Material-assembly-group-no: 4657.131.004



6 WG 210 /
FILLER NOZZLE



Plant

Page 1 from 1

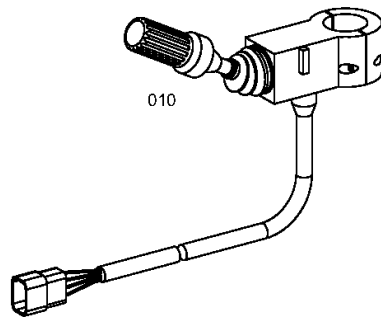
Material number: 4657.056.139

Plant: 465718329800

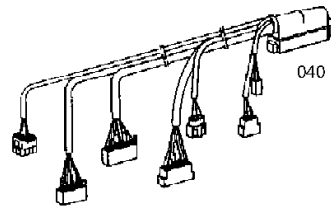
Material-assembly-group-no: 4657.183.298



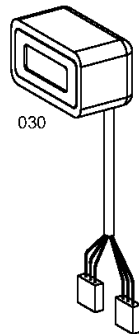
6 WG 210 /
LOOSE PARTS



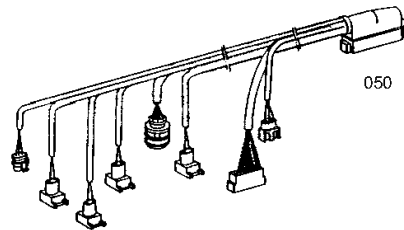
010



040



030



050



060



070



080



090