Kodiak AMERICA

KODIAK SNOW BLOWER MAINTENANCE MANUAL & PARTS BOOK

Warning:

Read and observe the safety precautions and instructions in this manual and carefully observe the safety labels on the machine. Failure to do so may cause serious injury, death or property loss. Keep this manual accessible at all times.

NOTICE:

A SNOW BLOWER is a highly technical and custom piece of equipment meant to operate in adverse weather conditions especially extremely cold temperatures.

Kodiak shall not be liable for any adverse consequences arising from the following circumstances：

- Operation of equipment not in accordance with the information in this manual.
- Lack of maintenance or proper lubrication
- Consequences resulting from unauthorized modification or alteration of the equipment.
- Equipment damage or accident caused by not using OEM parts or using untested or unauthorized parts or tools.
- Kodiak will not be responsible for any failure or damage to the machine due to force majeure such as natural disasters (earthquakes, typhoons, etc.) or political upheaval.

Different regions and local government departments may also have stricter operating regulations for snow blowers. In case of conflict with these safety operating regulations, the more stringent safety operating regulations should be followed.

Responsibilities of the Kodiak manufacturer

- To providing quality equipment
- Timely after-sales service
- Provide access to training to equipment operators and maintenance personnel.

Responsibilities of customer or other authorized personnel and management.

- Personnel involved in the operation and maintenance of the snow blower may only operate and maintain the snow blower if they have been systematically

trained and fully understand the instructions including operation and maintenance in this manual.

- Ensure that the operator is trained, fully understands Kodiak's operation and maintenance manual, has any applicable license as is required locally and is in good health.
- Periodically check the safety awareness of all relevant personnel.
- If there is any fault affecting the safety, stop operation immediately.
- Ensure timely maintenance and repair of the equipment.
- Plan the use of the equipment carefully and consciously.

Responsibilities of all operating personnel

- If there is any phenomenon that may cause abnormal operation of the equipment or if there is potential danger, operation should stop until the situation can be analyzed for safety.
- All personnel working on or around the equipment must obey all warning signals, signs and be vigilant for the safety of themselves and others.
- Pay attention to observe if there is any danger, and report the danger warning to the operator and any pertinent personnel in time.
    - Such as high voltage lines in the operating area, non-personnel, poor ground conditions, etc.

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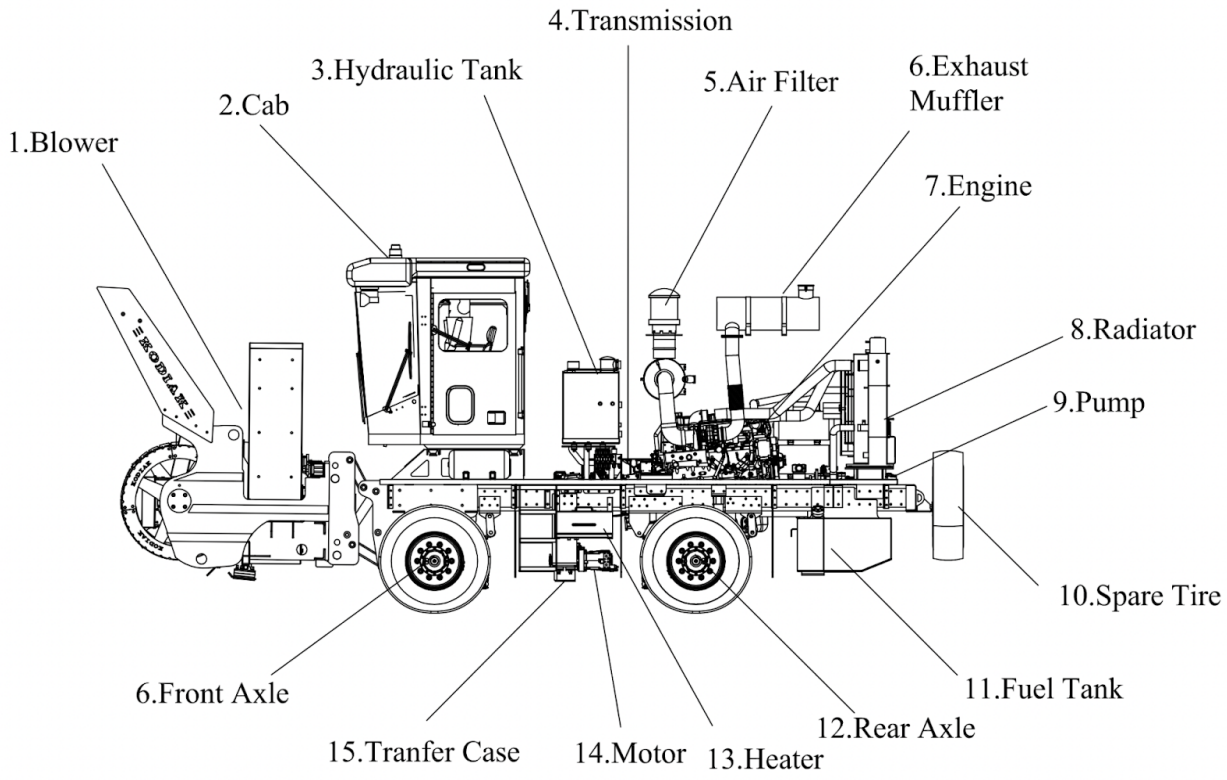
2.1. Troubleshooting

Part IV Parts List and List of Tools

1. Parts lists
2. List of Tools
3. Warranty Procedure

Part I Section 1. Technical description and Schematics.

Major Components



1. Blower Head. See Part II for maintenance & IV for specification details.
2. Cab. See Part IV for specification details.
3. Hydraulic Tank. See Part II for maintenance & IV for specification details.
4. Transmission. See Part II for maintenance and Part III Annex III for full service manual

5. Air Filter. See Part II for maintenance
6. Exhaust Muffler. See Part IV for specification details.
7. Engine. See Part II for maintenance and Part III Annex III for full service manual, and Part IV for adjacent parts.
8. Radiator. See Part II for maintenance & IV for specification details.
9. Pump. See Part II for maintenance and Part III Annex III for full service manual, and Part IV for adjacent parts.
10. Spare Tire. See Part II for maintenance & IV for specification details.
11. Fuel Tank. See Part II for maintenance & IV for specification details.
12. Rear Axle. See Part II for maintenance and Part III Annex III for full service manual, and Part IV for adjacent parts.
13. Heater. See Part II IV for specification details.
14. Motor. See Part II for maintenance and Part III Annex III for full service manual, and Part IV for adjacent parts.
15. Transfer Case. See Part II for maintenance and Part III Annex III for full service manual, and Part IV for adjacent parts.
16. Front Axle. See Part II for maintenance and Part III Annex III for full service manual, and Part IV for adjacent parts.

Part I

CR580S

Length (With spare tire & cutter bar): 8761mm

Length (With spare tire): 8311mm

Width (Chassis): 2627mm

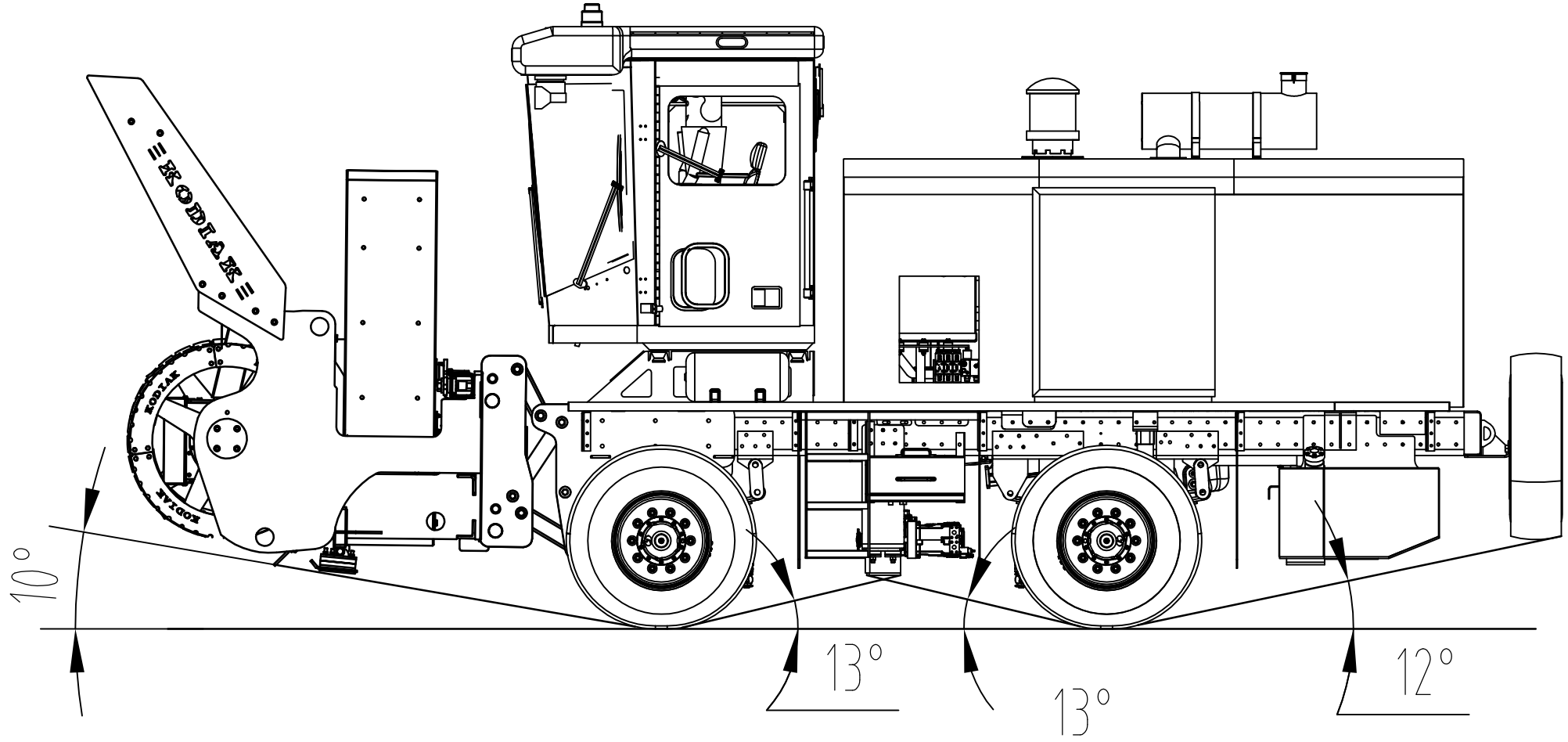
Width (With Blower): 2784mm

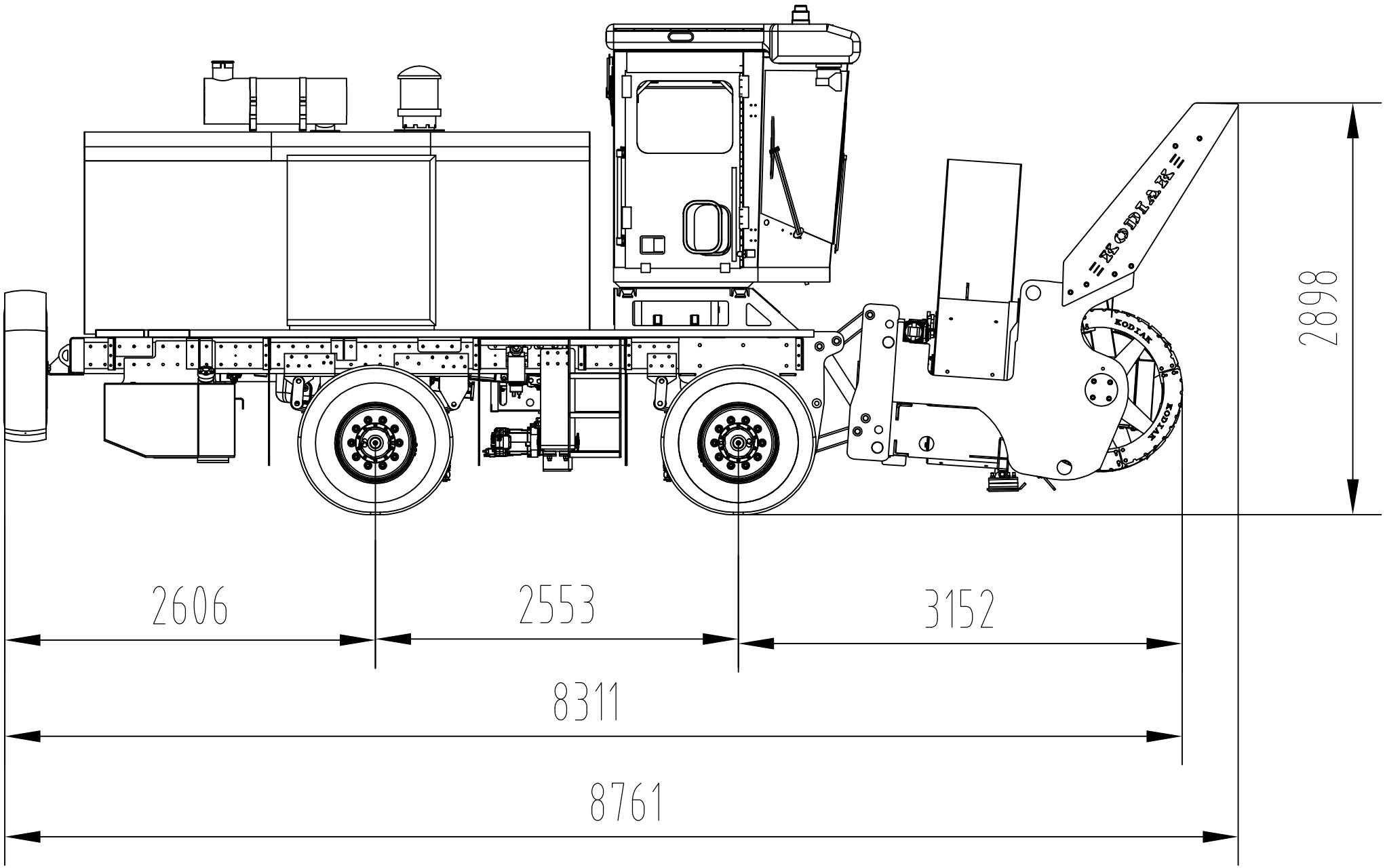
Height: 3523mm

Gross Weight: 14350Kg

Front Axle: 7900Kg

Rear Axle: 6450Kg




KODIAK
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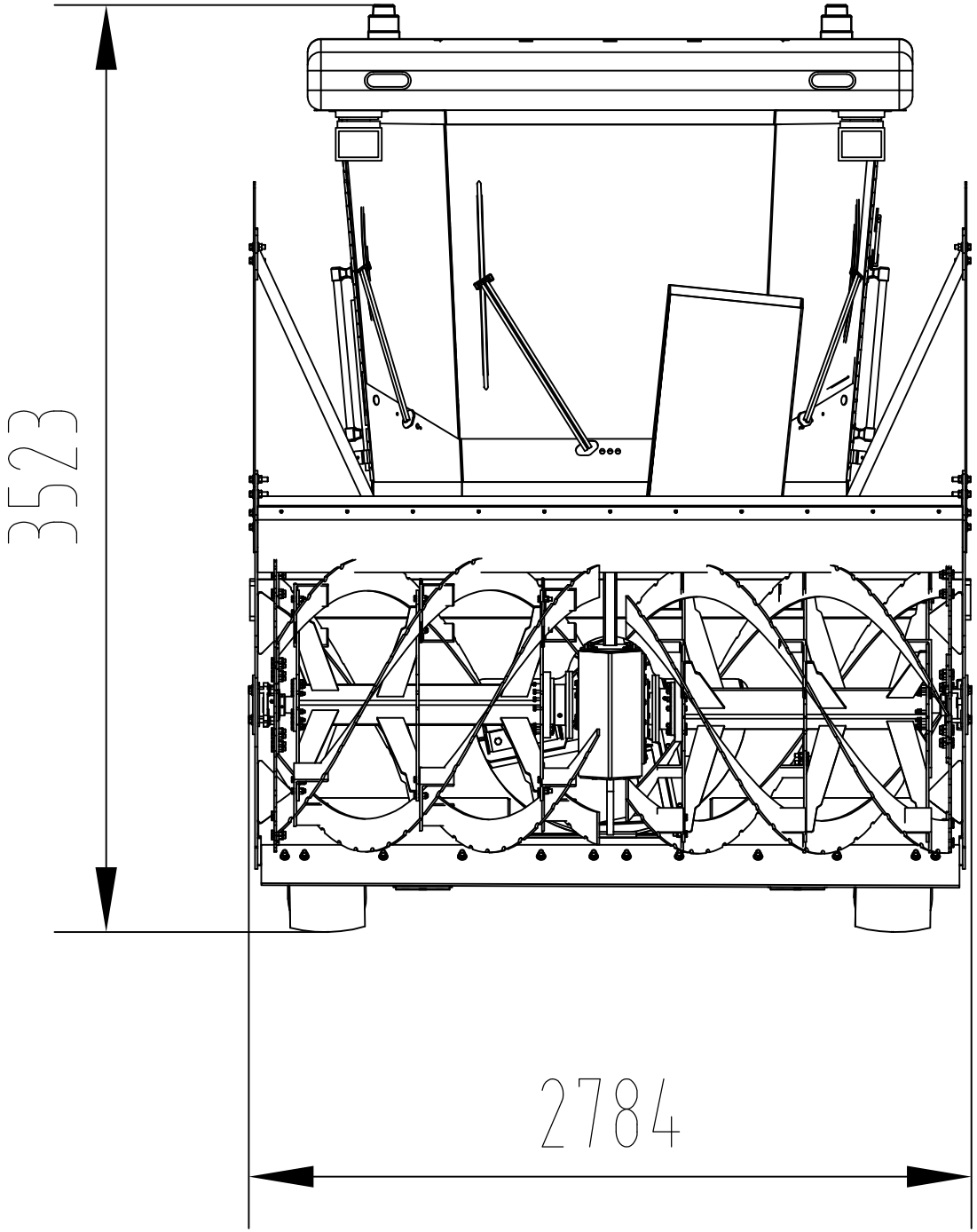
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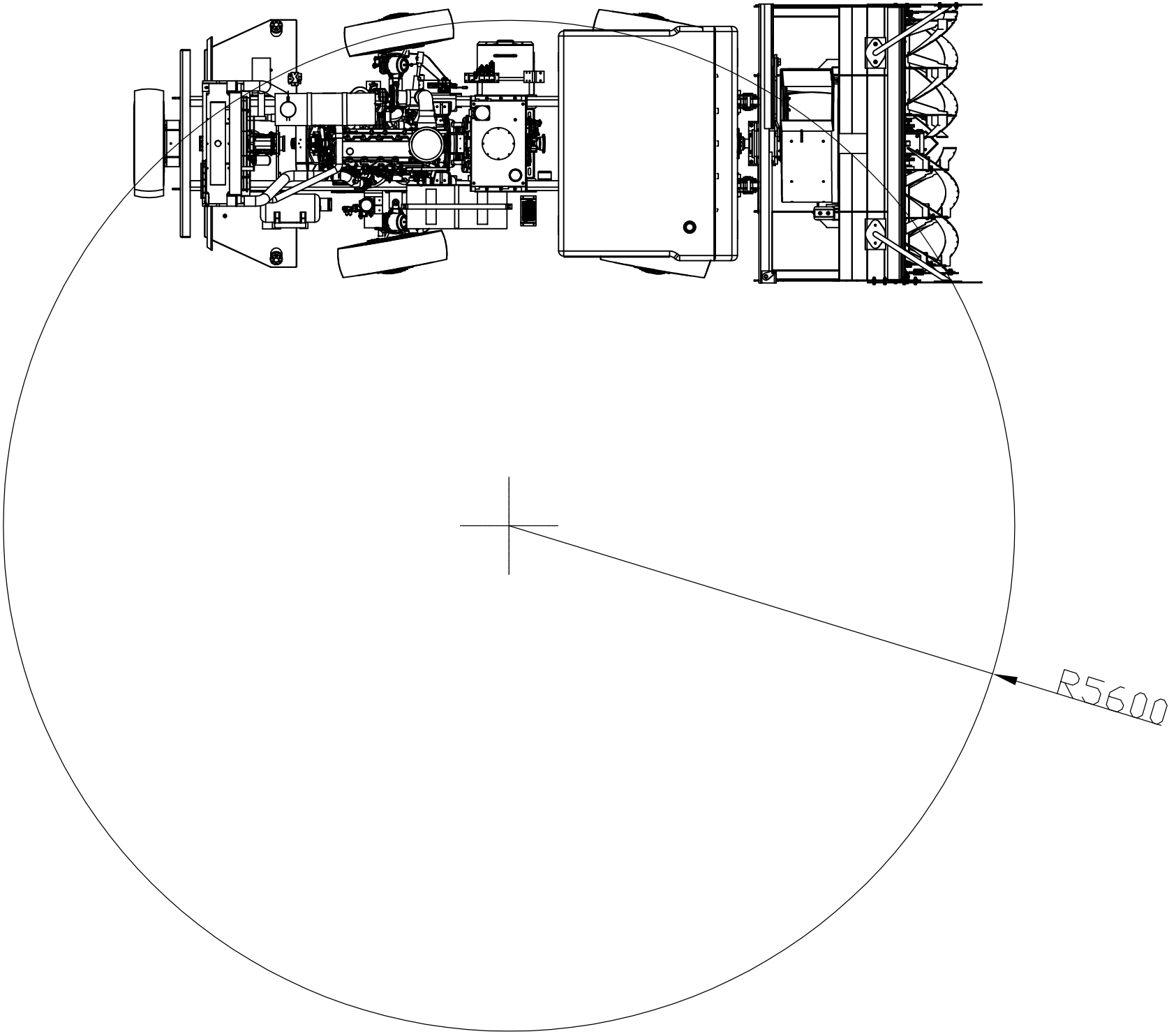
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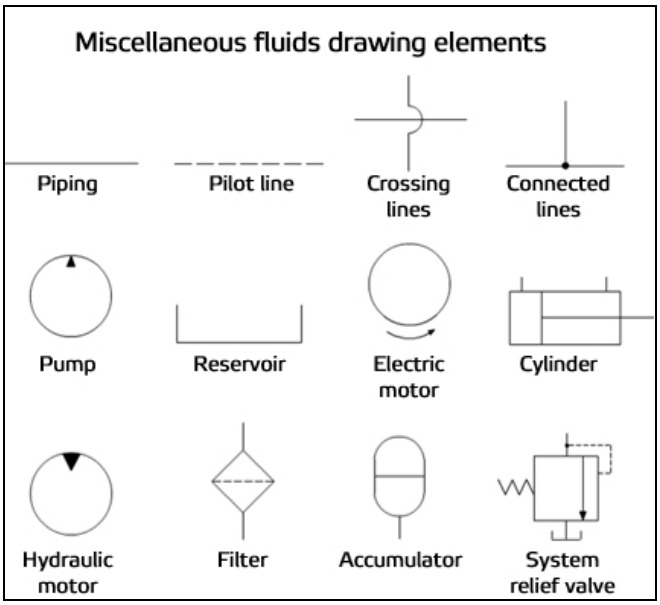
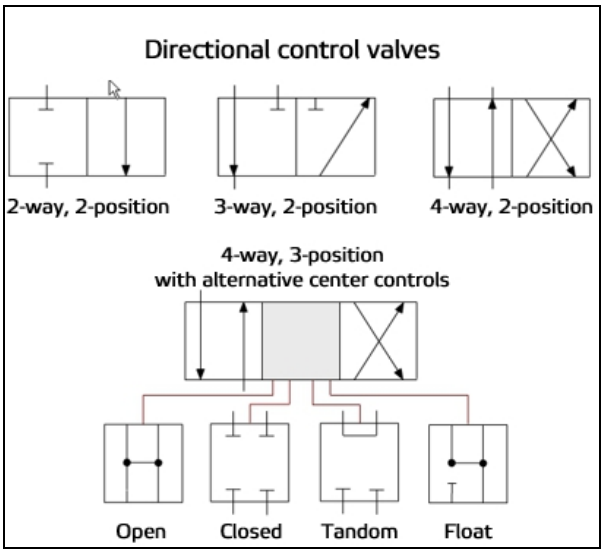
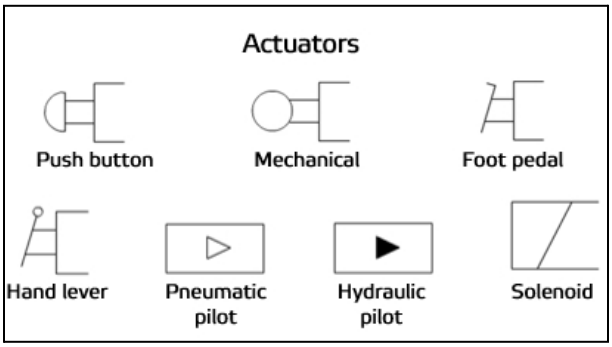
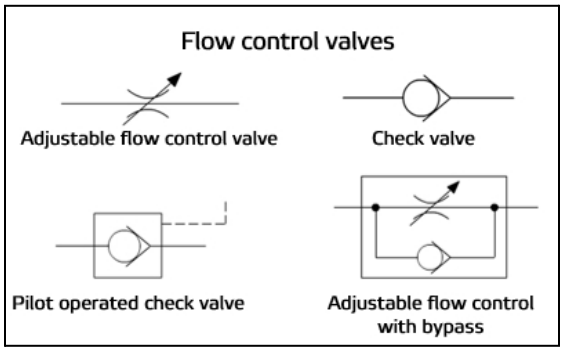
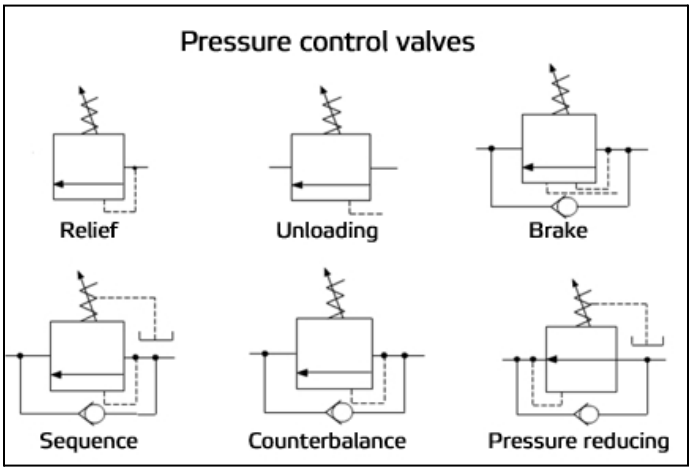
Hydraulic Schematics, models & diagrams

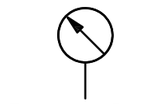

Miscellaneous fluids drawing elements
Piping
Pilot line
Crossing lines
Connected lines
Pump
Reservoir
Electric motor
Cylinder
Hydraulic motor
Filter
Accumulator
System relief valve


Directional control valves
2-way, 2-position
3-way, 2-position
4-way, 2-position
4-way, 3-position
with alternative center controls
Open
Closed
Tandom
Float

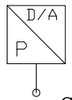

Actuators
Push button
Mechanical
Foot pedal
Hand lever
Pneumatic pilot
Hydraulic pilot
Solenoid


Flow control valves
Adjustable flow control valve
Check valve
Pilot operated check valve
Adjustable flow control with bypass

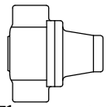

Pressure control valves
Relief
Unloading
Brake
Sequence
Counterbalance
Pressure reducing



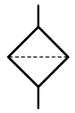
Pressure Gage



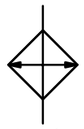
Pressure Sensor



Thermostat

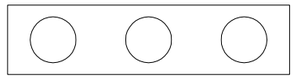


Filter

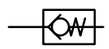


Cooler

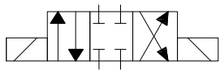
Tank



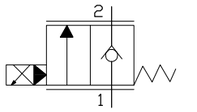
Grease Block



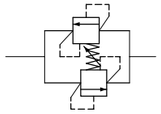
Check Valve



Manual Emergency Valve

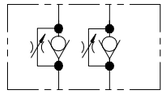


Flow Control Valve

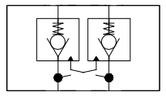


Refill/Relief Valve

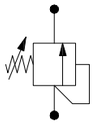
Throttle Valve



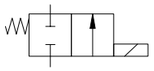
Throttle Valve



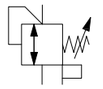
Pilot Operated Check Valve



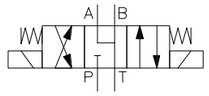
Reducing Valve



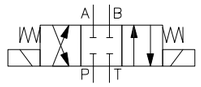
Lock Valve



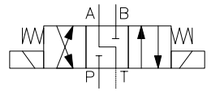
Relief Valve



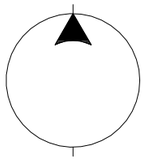
"Y"Directional Control Valve



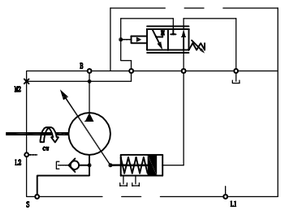
"O"Directional Control Valve



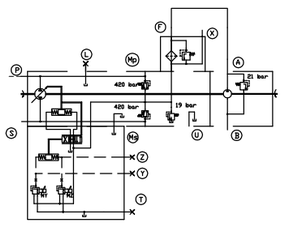
"N"Directional Control Valve



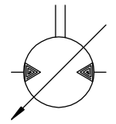
Gear Pump



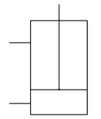
Constant Pressure Pump



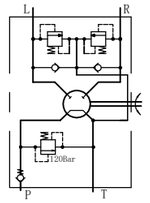
Drive Pump



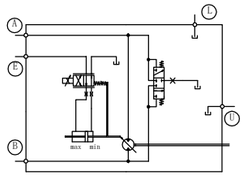
Gear motor



Cylinder



Steering Unit

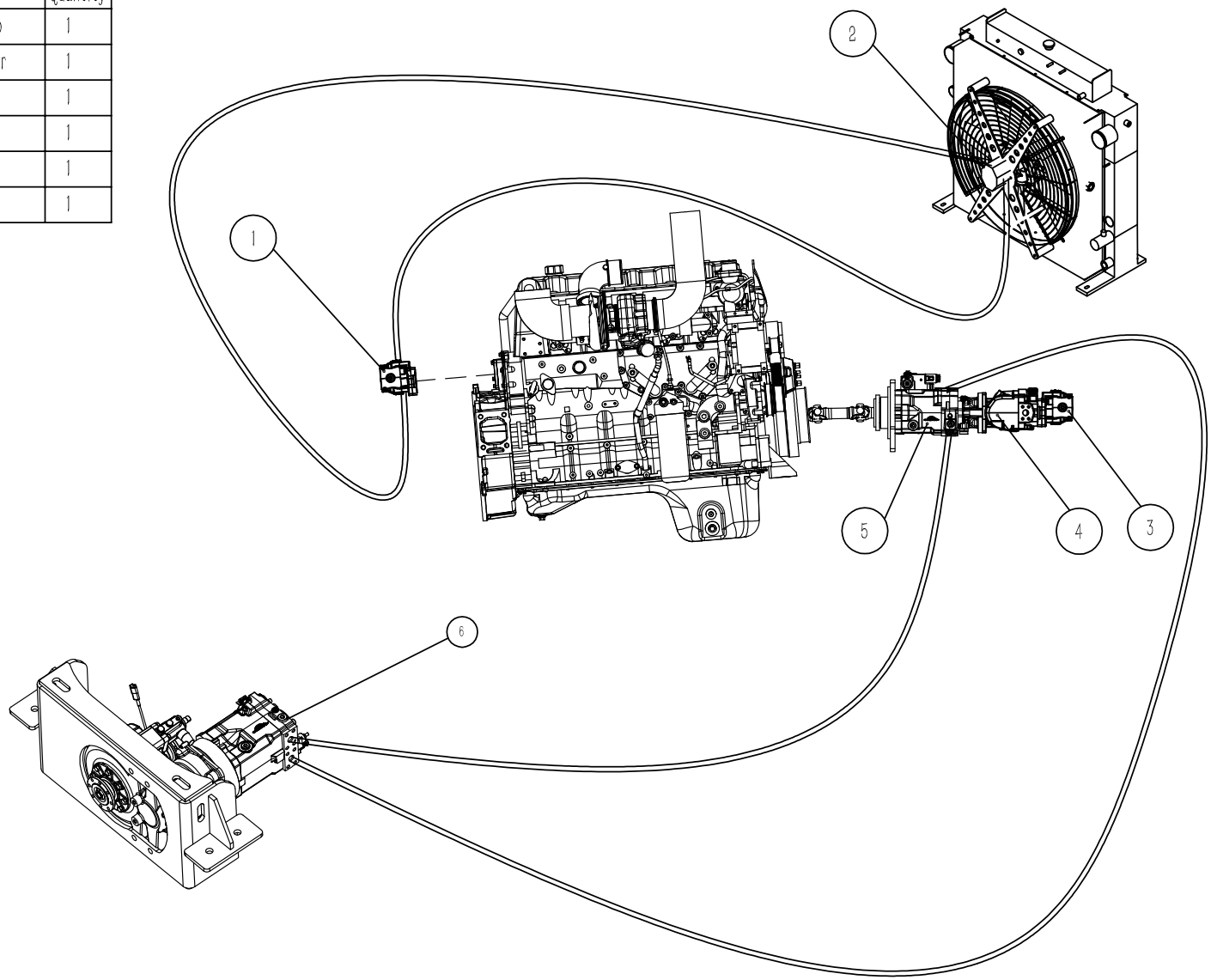


Drive Motor

Num	Part Num.	Description	Quantity
1	CBHB–F550–AF15	Fan Drive Pump	1
2	CMF–E550S–AFPS	Fan Drive Motor	1
3	KP30.31S0	Steering Pump	1
4	PV_JR_L_S45B_PC_21	Work Pump	1
5	HPV02–105L–E1D2	Drive Pump	1
6	HMV105–E6	Linde motor	1

Working pressures

1. 0-200 bar
3. 0-120 bar
4. 0-140 bar
5. 0-420 bar



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH± 0.5" BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description: Pump–Motor

Part Number: 550S–0500000–3

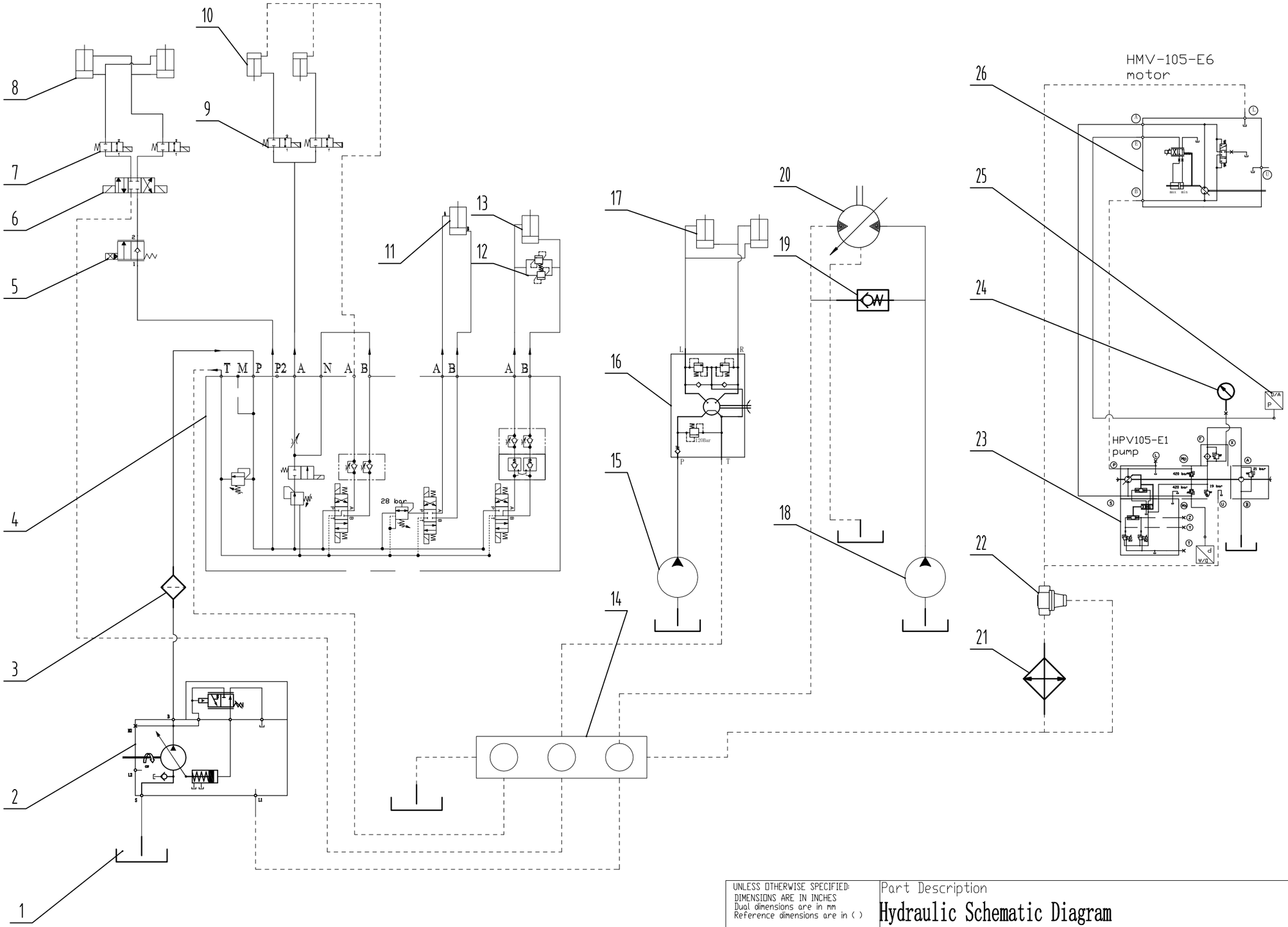
Revision: –0

DRAWN BY: JND DATE: 01/04/2020

SCALE: 3.2

WEIGHT:

SHEET 1 OF 1



1

KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional ± 1/8"
Angular: MACH ± 0.5 ° BEND
Machined/Drilled Holes:

All Others
x.x ± 0.10
x.xx ± 0.06
0.03

Part Description
Hydraulic Schematic Diagram

Part Number
CR550S-0800100

Revision
-0

DRAWN BY JND DATE 01/04/2020

SCALE: 3:2

WEIGHT:

SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	CR550S-320L	Hydraulic Tank	1
2	PV-JR-L-S45B-PC-21	Work pump	1
3	PBF0160F010NB16N	Hydraulic Pressure Filter	1
4	SC2-M1H1E-4L20009	Hydraulic Valve Bank	1
5	EPC102CN-P21F40-G06-24DD/C023320801301404	Flow control Valve	1
6	PVG32-1	Danfoss Manual EmergencyValve	1
7	EC102CN-P25F76-G06-24DD	Lock Valve	2
8	K06672	Rear Steering Cylinder	2
9	EC102CN-P25F76-G06-24DD	Lock Valve	2
10	K04398	Lift Cylinder	2
11	Transfer case	Shift Cylinder	1
12	GCRV102-S36-M1G06	Relief Valve	1
13	K01120/K90013	Volute Cylinder	1
14	AH0900316S	Grease Block	1
15	KP30.31S0	Steering Pump	1
16	OSPC500	Steering Gear	1
17	K06672	Front Steering Cylinder	2
18	CBHB-F550-AF15	Fan Drive Pump	1
19	RV-DN12-G1/2	Check Valve	1
20	CMF-E550-AFPS	Fan Drive Motor	1
21	B-0700065I22Y	Hydraulic Radiator	1
22	TV-12	Thermostat	1
23	HPV02-105L-E1D2	Drive Pump/Charge pump	1
24	638008A4G13LP0L6MP/#-XPQT7	Pressure Gage	1
25	S3550	Pressure Sensor	1
26	HMV105-E6	Linde Motor	1

KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

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DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional: 1/8"
Angular: MACH ±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

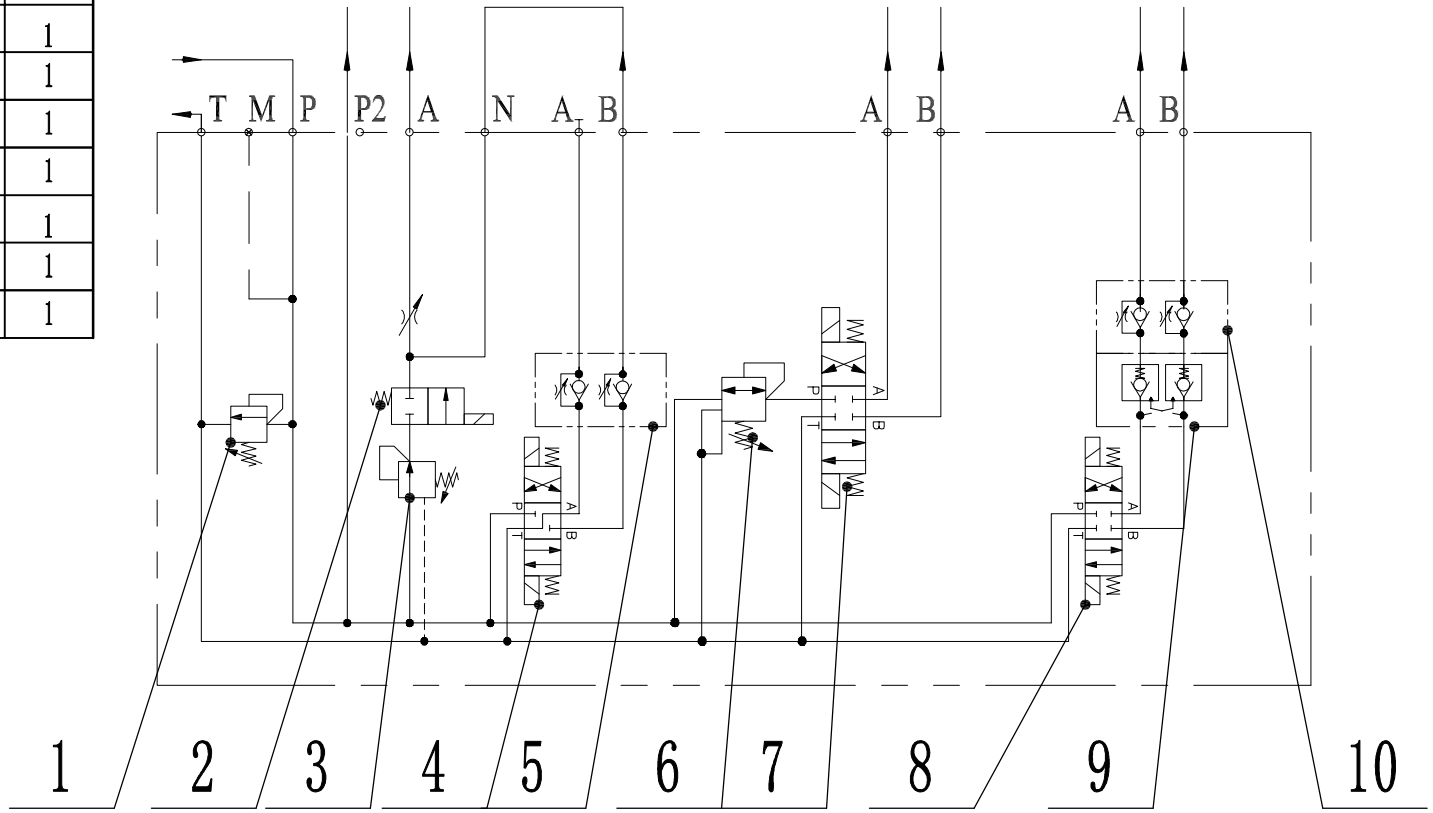
Part Description
Hydraulic Schematic Diagram

Part Number
CR550S-0800100

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	XYF10-08	Relief Valve	1
2	DASV10-28-0-N-00DR	Lock Valve	1
3	LPPR-10-30	Relief Valve	1
4	WDMFA06-AJB	Directional Control Valves	1
5	MSW-01-X-30	Throttle Valve	1
6	LDPR-08-6	Relief Valve	1
7	WDMFA06-ADB	Directional Control Valves	1
8	WDMFA06-ADB	Directional Control Valves	1
9	MPW-01-4-40	Two-way Yydraulic Lock	1
10	MPW-01-X-30	Throttle Valve	1



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional: 1/8"
Angular: MACH ±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

Part Description
Valve Bank

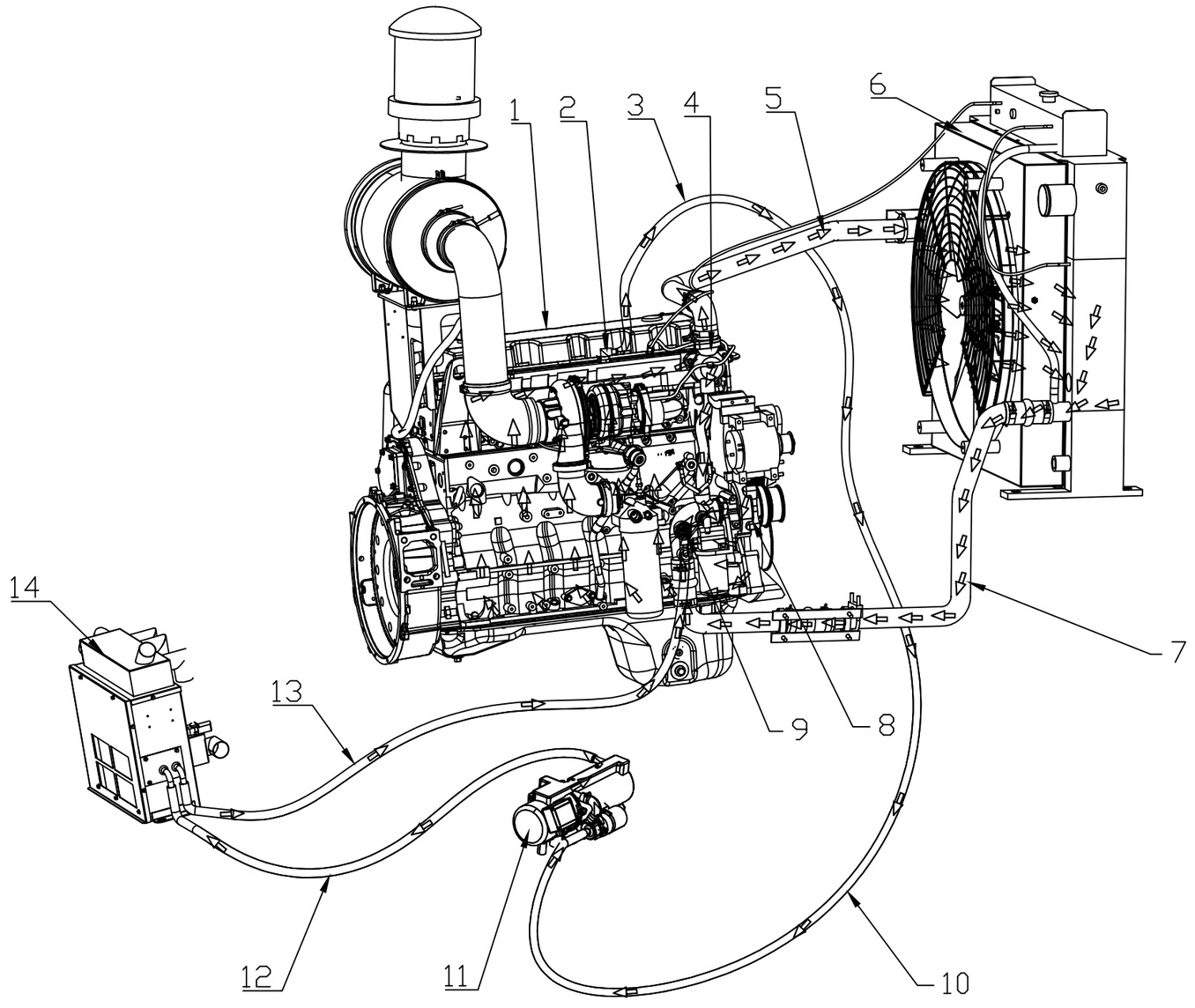
Part Number
SC2-M1H1EH-4L20009-V1

-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Water Schematics, models & diagrams

Num	Part Num.	Description	Quantity
1	QSZ13-C550	Engine	1
2	C2874497	Water-IN	1
3	ø16	Tube	1
4	C4952629	Thermostat	1
5	ø63.5	Tube	1
6	Y000084	Radiator	1
7	ø63.5	Tube	1
8	4974917	Pump	1
9	C2874497	Water-Return	1
10	ø16	Tube	1
11	YJH-Q15A.24V	Heater	1
12	ø16	Tube	1
13	ø16	Tube	1
14	TY46G15AB-ZGZQ-09	Cab heater/heat exchanger	1



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional: 1/8"
Angular: MACH ±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

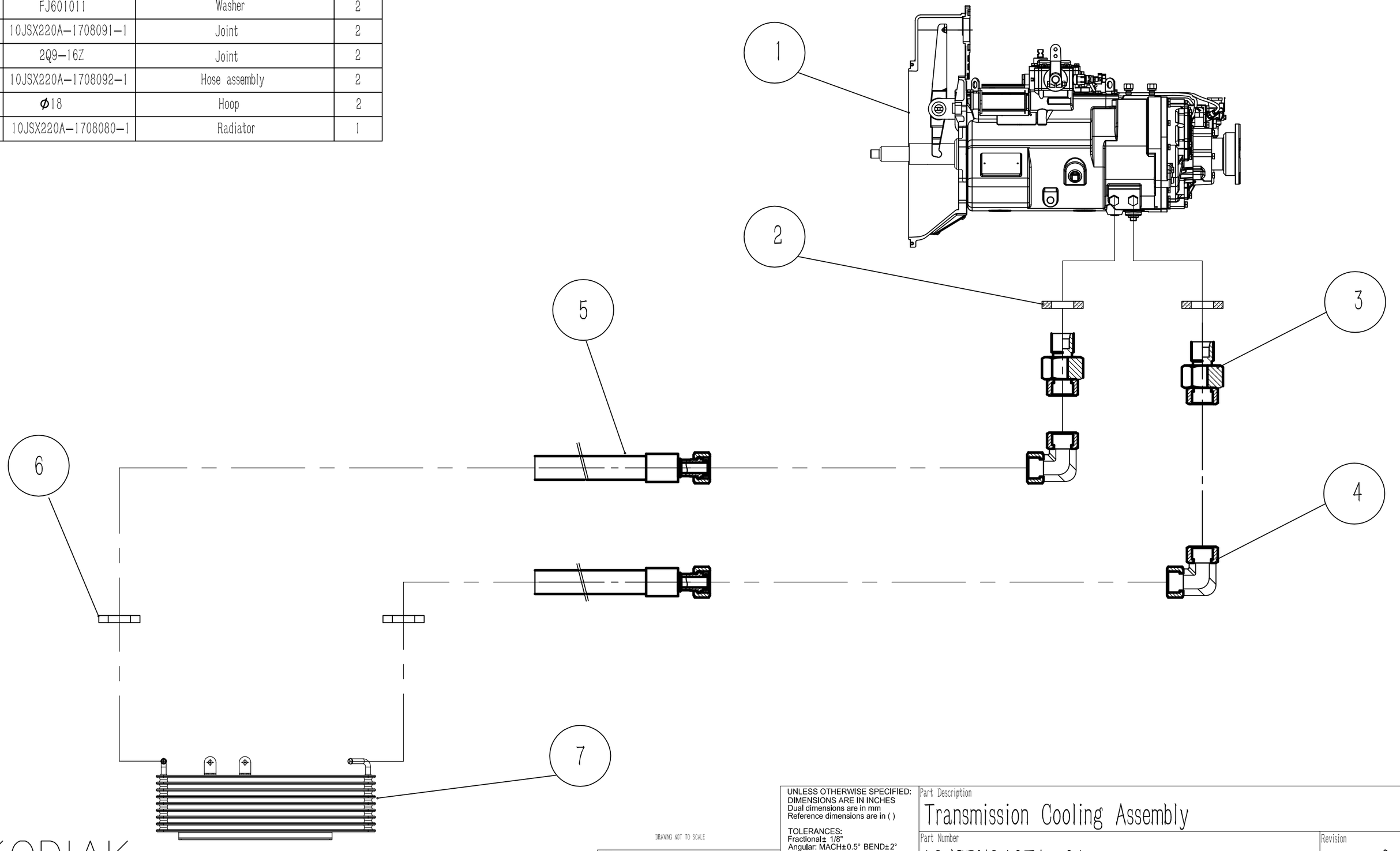
Part Description
Engine Pre-heating

Part Number
CR550S-HEATER+RADIATOR

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	12JSDX240TA	Transmmission	1
2	FJ601011	Washer	2
3	10JSX220A-1708091-1	Joint	2
4	2Q9-16Z	Joint	2
5	10JSX220A-1708092-1	Hose assembly	2
6	Φ18	Hoop	2
7	10JSX220A-1708080-1	Radiator	1



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH±0.5° BEND±2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Transmission Cooling Assembly

Part Number
12JSDX240TA-01

Revision
-0

DRAWN BY JND DATE 01/04/2020

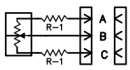
SCALE: 3:2

WEIGHT:

SHEET 1 OF 1

Electrical Schematics, models & diagrams

Wire colors abbreviation	
Red	RD
Black	BK
White	WT
Pink	PK
Purple	PL
Blue	BU
Green	GN
Yellow	YE
Orange	OG
Gray	GY
Brown	BN

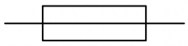


Potentiometer

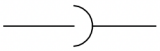
Sensor

Power supply

Shielded wire



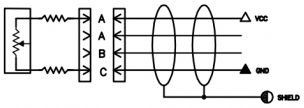
Fuse



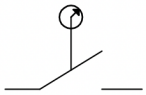
Electrical connector

Resistor

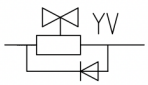
Grounding



Magnetic induction sensor



Pressure Switch



Hydraulic solenoid valve

S
Download port
5 3 2
U GND
U GND
S25 VT-022 1.0
S43 VT-035 1.0
S20 BK-018 1.0
S37 BK-018 1.0
S42 BK-018 1.0
E20 BK-055 1.0
E37 BK-055 1.0
S25
S43

Engine Throttle

FWD
REV
Drive Joy
"B"
6 forward N.C.
8 backward N.C.
5、7 COM
1 VDC
2 OUTPUT
VCC

Hyd Oil Temp Sensor
Fuel Level Sensor
Drive Pump Sensor
Deceleration pedal
Make up oil pump pressure switch
Working Pump Sensor
Accelerator pedal
红线
黑线
白线
Air Pressure Sensor
Gearbox Speed Sensor
2kΩ

G-4 RD-040	S51	Throttle PWR	RD-040
G-3 YE-044	S55	Engine Throttle Signal	YE-044
J5-2 YE-030	S36	Engine Start-Switch	YE-030
K-6 WH-043	S54	Drive Joy FWD Signal	WH-043
K-2 YE-029	S35	Drive Joy REV Signal	YE-029
K-8 WH-042	S53	Drive Joy REV Switch	WH-042
B-34 BU/YE 0.85	S34	Hyd Oil Temperature	WH-028
A-16 RD/BU 0.85	S52	Fuel Level	WH-041
A-14 BU/WT 0.85	S33	Front Diff Lock Feedback	WH-027
A-13 YE/BK 0.85	S24	FWD Pressure signal	WH-021
X6-2 YE-34	S41	Deceleration Pedal	YE-034
B-23 BU/BK 0.85	S23	Make up Pressure Switch	WH-020
B-40 BU/RD 0.85	S40	Working Pump Sensor	YE-033
X5-B WH-019	S22	Accelerator Pedal	WH-019
B-39 BU/WT 0.85	S39	Air Pressure	YE-032
A-15 BN 0.85	S38	Gearbox Speed Sensor	WH-031
L-2 YE-075	E55	Parking signal	YE-075
D-2 YE-064	E36	Brake signal	YE-064
X8-11 WH-074	E54	Emergency Stop-NC	WH-074
G-10 WH-072	E52	Rear Steer-Switch	WH-072
G-7 WH-062	E33	Gearbox Hight-Switch	WH-062
G-5 WH-059	E24	Diff Lock-Switch	WH-059
G-8 WH-068	E41	Travel Lock-Switch	WH-068
G-9 WH-058	E23	Plow Float-Switch	WH-058
A-9 BN/YE 0.85	E40	Gearbox Slow Feeback	WH-067
A-6 BN/BU 0.85	E22	Gearbox Fast Feeback	WH-057
A-8 BK/RD 0.85	E39	Rear Diff Lock Feedback	WH-066

Steer Valve Lock 1	WH-017	S18	A-12 BU/YE 0.85
Rear Steer Flow Valve	WH-016	S17	B-17 BU 0.85
Rear L (L+Switch)	WH-015	S16	B-16 YE/BK 0.85
Rear R (R+Switch)	WH-014	S15	B-15 YE/WT 0.85
Blower UP	WH-013	S14	B-14 BN/WT 0.85
Blower Down	WH-012	S13	B-13 BN/YE 0.85
Volute L	WH-011	S12	B-12 OG/WT 0.85
Volute R	WH-010	S11	B-11 OG/BK 0.85
SPARE		S02	
SPARE		S03	
SPARE		S04	
SPARE		S05	
SPARE		S06	
Travel Lock 1	WH-006	S07	B-7 WT/GR 0.85
Travel Lock 2	WH-007	S08	B-8 WT/YE 0.85
Plow Float	WH-008	S09	B-9 WT/BK 0.85
SPARE		E18	
SPARE		E17	
Pump FWD Valve	WH-053	E16	A-5 YE/BU 0.85
PumpREV Valve	WH-052	E15	A-4 YE/RD 0.85
Travel Motor Valve	WH-051	E14	A-3 GR/RD 0.85
Gearbox Low Valve	WH-050	E13	B-33 GN/WT 0.85
Steer Valve Lock 2	WH-049	E12	A-2 BU/BK 0.85
Gearbox Hight Valve	WH-048	E11	B-31 GN/BK 0.85
Diff Lock Valve	WH-046	E02	A-1 RD/GN 0.85
SPARE		E03	
SPARE		E04	
SPARE		E05	
SPARE		E06	
SPARE		E07	
SPARE		E08	
SPARE		E09	
SPARE		E25	
SPARE		E26	
SPARE		E27	
Back UP Alarm	YE-061	E28	PG-16 YE-061
SPARE		E29	
SPARE		E30	
SPARE		E31	
Engine Start	YE-071	E50	PJ-21 YE-071
SPARE		E42	
SPARE		E43	
SPARE		E44	
SPARE		E45	
System Alarm	WH-069	E46	N-6 WH-069
SPARE		E47	
SPARE		E48	
SPARE		E49	

J1939
Engine
CAN1H
CAN1L
120 OHM
S47
S29
CAN2H
CAN2L
S46
S28
CAN3H
CAN3L
S45
S27
CAN4H
CAN4L
S44
S26
5A
CAN2H
CAN2L

Work Handle
VDC
CANH
CANL
GND

Front Steer Sensor
Rear Steer Sensor

S01 RD-001 1.0
S19 RD-001 1.0
S50 RD-009 1.0
S32 RD-009 1.0
S10 RD-009 1.0
E10 RD-047 1.0
E32 RD-047 1.0
E01 RD-045 1.0
E19 RD-045 1.0
E51 RD-045 1.0

20A PH-6
5A PH-5
15A PH-9
15A PH-2

PB 9-968974-2		
1	Work lights	WH-45
2	Clearer light	WH-48
3	Engine house lights	RD-116
4		
5	Switch lamp	RD-161
6	Heating	RD-139
7	Strobe lights	RD-115
8		
9	Clearer light	RD-111
10	Ground lead	BK-140
11		
12	Steering colm PWR	RD-131
13		
14		
15		
16	24V charge point	WH-19
17	Engine ECM PWR	RD-080
18		

PC 8-968974-1		
1		
2		
3	Cab Fans	WH-9&11
4		
5		
6		
7		
8		
9	Diagnostic PWR	RD-089
10		
11	Clutch switch PWR	RD-099
12	Cab step light	WH-6
13		
14		
15	Cab lights	WH-7&12
16	Lo Beam	WH-46
17		
18		

PD 5-968975-1		
1	Wiper PWR	WH-10
2	Clutch control	BU/RD
3	Windows motor	WH-3
4		
5		
6		
7	Hi beam	WH-47
8		
9	Mirorr PWR	WH-2
10		
11		
12	Radio PWR	WH-1
13		
14		
15		
16		
17	L glass heating	WH-17
18	Parking brake valve	RD-100
19		
20		
21	Spot lights PWR	WH-13

PE 6-968975-1		
1		
2		
3	R wipe park	WH-HF
4		
5		
6	R wiper park n1	WH-RL
7		
8		
9	R wiper park n2	WH-RH
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		

G DT06-12S			
1	GND	BK-176	U
2	Switchs PWR	RD-166	PG-2
3	Engine Throttle Signal	YE-044	XS-55
4	Throttle PWR	RD-040	XS-51
5	Diff Lock-Switch	WH-059	XE-24
6			
7	Transfer case High	WH-062	XE-33
8	Travel Lock-Switch	WH-068	XE-41
9	Plow Float-Switch	WH-058	XE-23
10	Rear Steer-Switch	WH-072	XE-52
11	Switch lamp	RD-161	PB-5
12			

C Joystick DTM06-6S			
1	GND	BK-179	U
2	Joystick PWR	RD-173	PH-17
3	CAN 3 H JX3/GN-037		XS-45
4	CAN 3 L JX3/VT-024		XS-27
5	CAN SHIELD		U
6			

K Stroker 174045-2			
1	Stroker PWR	RD-172	PH-15
2	Stroker REV Signal	YE-029	XS-35
3			
4			
5	Stroker PWR	RD-172	PH-15
6	Stroker FWD Signal	WH-043	XS-54
7	Stroker PWR	RD-172	PH-15
8	Stroker REV Switch	WH-042	XS-53

I Heating DJ7021-6.3-21			
1	GND	BK-178	U
2	Heating	RD-139	PB-6

L Parking brake valve		
1	Parking brake valve RD-100	PD-18
2	Parking brake signal YE-075	XE-55&J1-3

M IFM dispaly DT06-4S			
1	GND	BK-180	U
2	IFM dispaly PWR	RD-170	PH-12
3	CAN 2 H ②-4 JX/GN-038		XS-46
4	CAN 2 L ②-5 JX/VT-025		XS-28

N Fault light AMP-6S			
1	GND	BK-181	U
2	Lamp PWR	RD-167	PG-6
3	Check Engine	YE-092	A-17
4	Stop Engine	YE-093	A-18
5	Wait Engine	YE-094	A-19
6	System Alarm	WH-069	XE-46

V Charge Point 282080-1			
1	GND	BK-184	U
2	Charge Point	RD-169	PG-20

PF 9-968975-2		
1		
2		
3	Front wiper J	RD-106
4	Washer	RD-107
5		
6	Washer pump	WH-7+9 1.5
7		
8		
9	R glass heating	WH-28
10		
11		
12		
13	Flash PWR	RD-121
14		
15	L wiper motor n2	WH-LH
16	Glass heating	YE-127
17	Side wiper n1	RD-128
18	L wiper motor n1	WH-LL
19	Side wiper n2	RD-129
20	L wiper motor park	WH-LF
21		

PG 8-968975-1		
1	Brake lights	RD-112
2	Switchs PWR	RD-166
3	Sensor PWR	RD-077
4	Glass heating	YE-127
5	Brake signal	YE-064
6	Lamp PWR	RD-167
7		
8	Clutch control	BU/RD
9	Steering colm PWR	RD-185
10	Ground lead	BK-185
11		
12	Filter heating PWR	RD-082
13	Lo beam signal	YE-119
14		
15	Air dry PWR	RD-083
16	IPM Back up alarm	YE-061
17	Hi beam signal	YE-120
18	Preasure switch 3	RD-078
19	Back up alarm	RD-114
20	Charge Point	RD-169
21	Dispaly PWR	RD-096

PH 5-968747-1		
1	Back up lights	RD-113
2	Controller 3 PWR	RD-045
3	Preasure switch 2	RD-087
4		
5	Controller 4 PWR	RD-009
6	Controller 1 PWR	RD-001
7	Back up light SW	YE-126
8	Preasure switch 1	RD-088
9	Controller 2 PWR	RD-047
10		
11		
12	IPM dispaly PWR	RD-170
13		
14	Sensor PWR	RD-171
15	Stroker PWR	RD-172
16		
17	Working handle PWR	RD-173
18	Brake switch PWR	RD-133

PJ 7-968975-1		
1	IGN 15+ PWR	RD-132
2	Emergency stop PWR	RD-117
3	Generator PWR	RD-188
4	IGN 15+ PWR	RD-132
5	Clutch control	BU/RD 0.75
6	A/C PWR	RD-098
7	Strobe lights SW	YE-123
8	Clearer light SW	RD-124
9	Eaton neutral signal	YE-085 PJ-18
10	Ground lead	BK-174
11		
12	Clutch brake	WH/RD 0.85
13	Work lights SW	YE-125
14	Emergency stop NO	WH-118
15	Engine start PWR	YE-079
16		
17		
18	Eaton neutral signal	YE-085 PJ-9
19	Engine IGN 15+	RD-081
20	Strobe lights	WH-30 2.0
21	Engine start signal	YE-071

S Download port D9-02		
2	Download port-3 GN-035	XS-43
3	Download port-3 VT-022	XS-25
5	GND BK-183	U

R Steer sensor DT06-4S			
1	Sensor GND	BK-182	U
2	Sensor PWR	RD-171	PH-14
3	CAN 4 H JX2/GN-036		XS-44
4	CAN 4 L JX2/VT-023		XS-26

T CAN-1 DT04-3P		
A	CAN 1 H JX5/GN-039	XS-47
B	CAN 1 L JX5/VT-026	XS-29
C	CAN SHIELD	U

XE IPM Controller-E 828907-1		
GND	E20/E37 GND BK-055	U
PWR	E10/E32 PWR RD-047	PH-9
PWR	E01/E19/E51 PWR RD-045	PH-2
E-02	Diff Lock Valve WH-046	A-1
E-11	Transfer case high Valve WH-048	B-31
E-12	Steer Valve Lock 2 WH-049	A-2
E-13	Transfer case Low Valve WH-050	B-33
E-14	Travel Motor Valve WH-051	A-3
E-15	PumpREV Valve WH-052	A-4
E-16	Pump FWD Valve WH-053	A-5
E-22	Transfer case Fast Feeback WH-057	A-6
E-23	Plow Float-Switch WH-058	G-9
E-24	Diff Lock-Switch WH-059	G-5
E-28	Back UP Alarm YE-061	PG-16
E-33	Transfer case high-Switch WH-062	G-7
E-35	Hyd Oil level switch WH-063	B-35
E-36	Brake signal YE-064	D-2
E-39	Rear Diff Lock Feedback WH-066	A-8
E-40	Transfer case Slow Feeback WH-067	A-9
E-41	Travel Lock-Switch WH-068	G-8
E-46	System Alarm WH-069	N-6
E-50	Engine Start YE-071	PJ-21
E-52	Rear Steer-Switch WH-072	G-10
E-54	Emergency Stop-NC WH-074	PJ-19
E-55	Parking brake signal YE-075	L-2

XS IPM Controller-S 828907-1		
1	S20/S37/S42 GND BK-018 1.0	U
2	S01/S19 PWR RD-001 1.0	PH-6
3	S50/S32/S10 PWR RD-009 1.0	PH-5
S-07	Travel Lock 1 WH-006	B-7
S-08	Travel Lock 2 WH-007	B-8
S-09	Plow Float WH-008	B-9
S-11	Volute R WH-010	B-11
S-12	Volute L WH-011	B-12
S-13	Blower Down WH-012	B-13
S-14	Blower UP WH-013	B-14
S-15	Rear R (R+Trigger) WH-014	B-15
S-16	Rear L (L+Trigger) WH-015	B-16
S-17	Rear Steer Flow Valve WH-016	B-17
S-18	Steer Valve Lock 1 WH-017	A-12
S-22	Accelerator Pedal WH-019	X5-B
S-23	Make up Pressure Switch WH-020	B-23
S-24	FWD Pressure signal WH-021	A-13
S-25	Download port-3 VT-022	S-3
S-26	CAN 4 L VT-023 1.0	R-4
S-27	CAN 3 L VT-024 1.0	C-4
S-28	CAN 2 L VT-025 1.0	M-4
S-29	CAN 1 L VT-026 1.0	T-B
S-33	Front Diff Lock Feedback WH-027	A-14
S-34	Hyd Oil Temperature WH-028	B-34
S-35	Stroker REV Signal YE-029	K-2
S-36	Engine Start-Switch YE-030	J5-2
S-38	Transfer case speed WH-031	A-15
S-39	Air Pressure YE-032	B-39
S-40	Working Pump Sensor YE-033	B-40
S-41	Deceleration Pedal YE-034	X6-B
S-43	Download port-3 GN-035 1.0	S-2
S-44	CAN 4 H GN-036 1.0	R-3
S-45	CAN 3 H GN-037 1.0	C-3
S-46	CAN 2 H GN-038 1.0	M-3
S-47	CAN 1 H GN-039 1.0	T-A
S-51	Throttle PWR RD-040	G-4/ X5-C/X6-C
S-52	Fuel Level WH-041	A-16
S-53	Stroker REV Switch WH-042	K-8
S-54	Stroker FWD Signal WH-043	K-6
S-55	Engine Throttle Signal YE-044	G-3

F Turn signal lamp 282087-1			
1	Turn R	YE-109	J2-12
2	Turn L	YE-110	J5-4
3			

E Horn 1-967325-1			
1	GND	BK-134	U
2	Horn PWR	YE-122	J2-5

D Brake switch			
1	Brake switch PWR	RD-133	PH-18
2	Brake signal	YE-064	XE-36&PG-5

J1 Steering colm DT04-6P			
1	Turn R	YE-109	J2-12
2	Hi beam signal	YE-120	J2-2
3	Parking brake signal	YE-075	L-2
4	Transfer case Fast Feeback WH-057		A-6
5	Transfer case Slow Feeback WH-067		A-9
6	Turn L	YE-110	J5-4

J2 Steering colm DT04-12P			
1	Lo beam signal	YE-119	PG-13
2	Hi beam signal	YE-120	PG-17&J1-2
3	Flash PWR	RD-121	PF-13&J3-2
4	Steering colm PWR	RD-185	PG-9
5	Horn PWR	YE-122	E-2
6	Washer	RD-107	X7-7&PF-4
7	Steering colm PWR	RD-185	PG-9
8	Front wiper J	RD-106	X7-3&PF-3
9	Front wiper n2	WH-105	X7-4
10	Front wiper n1	WH-103	X7-2
11	Front wiper return	WH-104	X7-6
12	Turn R	YE-109	XB-2&F-1&J1-1

J3 Steering colm DT04-12P			
1	Clearer light SW	RD-124	J3-7
2	Flash PWR	RD-121	J2-3
3			
4	Steering colm PWR	RD-185	PG-9
5	Strobe lights SW	YE-123	PJ-7
6	Steering colm PWR	RD-185	PG-9
7	Clearer light SW	RD-124	PJ-8&J3-1
8	High beam signal	RD-187	J5-6
9	Steering colm PWR	RD-185	PG-9
10	Work lights SW	YE-125	PJ-13
11	Steering colm PWR	RD-185	PG-9
12	Back up light SW	YE-126	PH-7

J4 Steering colm DT04-6P			
1	Steering colm PWR	RD-185	PG-9
2	Glass heating	YE-127	PG-4&PF-16
3	Steering colm PWR	RD-185	PG-9
4	Side wiper n1	RD-128	PF-17
5	Side wiper n2	RD-129	PF-19
6	GND	BK-130	U

J5 Steering colm DT04-6P			
1	Steering colm PWR	RD-131	PB-12
2	Engine Start-Switch	YE-030	XS-35
3	IGN 15+ PWR	RD-132	PJ-1&PJ-4
4	Turn L	YE-110	P-2&X9-3&J1-6
5	Steering colm PWR	RD-185	PG-9
6	High beam signal	RD-187	J3-8

A Engine wire harness			
A	Engine start PWR	YE-079	PJ-15
B	Engine ECM PWR	RD-080	PB-17
C	Engine IGN 15+	RD-081	PJ-19
D	Filter heating PWR	RD-082	PG-12
E	Air dry PWR	RD-083	PG-15
F	Clutch brake	WH/RD	PJ-12
G	Eaton neutral signal	YE-085	PJ-18
H	Clutch switch	WH-086	X3-2
I	Preasure switch 2 PWR	RD-087	PH-3
J	Preasure switch 1	RD-088	PH-8
K	Diagnostic PWR	RD-089	PC-9
L	Generator PWR	RD-188	PJ-3
1	Diff Lock Valve	WH-046	XE-02
2	Steer Valve Lock 2	WH-049	XE-11
3	Drive Motor Valve	WH-051	XE-14
4	PumpREV Valve	WH-052	XE-15
5	Pump FWD Valve	WH-053	XE-16
6	Transfer case Fast Feeback	WH-057	XE-22&J1-4
7			
8	Rear Diff Lock Feedback	WH-066	XE-39
9	Transfer case Slow Feeback	WH-067	XE-40&J1-5
10			
11			
12	Steer Valve Lock 1	WH-017	XS-18
13	FWD Pressure signal	WH-021	XS-24
14	Front Diff Lock Feedback	WH-027	XS-33
15	Transfer case speed	WH-031	XS-38
16	Fuel Level	WH-041	XS-52
17	Check Engine	YE-092	N-3
18	Stop Engine	YE-093	N-4
19	Wait Engine	YE-094	N-5

B Hyd wire harness 192900-0431			
1	GND	BK-076	U
2			
3			
4			
5			
6			
7	Travel Lock 1	WH-006	XS-07
8	Travel Lock 2	WH-007	XS-08
9	Plow Float	WH-008	XS-09
10			
11	Volute R	WH-010	XS-11
12	Volute L	WH-011	XS-12
13	Blower Down	WH-012	XS-13
14	Blower UP	WH-013	XS-14
15	Rear R (R+Trigger)	WH-014	XS-15
16	Rear L (L+Trigger)	WH-015	XS-16
17	Rear Steer Flow Valve	WH-016	XS-17
18			
19			
21			
22			
23	Make up Pressure Switch	WH-020	XS-23
24			
25			
26			
31	Transfer case high Valve	WH-048	XE-11
32			
33	Steer Valve Lock 2	WH-049	XE-33
34	Hyd Oil Temperature	WH-028	XS-34
35	Hyd Oil level switch	WH-063	XE-35
36			
37			
38			
39	Air Pressure	YE-032	XS-39
40	Working Pump Sensor	YE-033	XS-40
46	Preasure switch 3	RD/WH 0.85	PG-3
47	Sensor PWR	RD/BN 0.85	PG-18
48			

X1 Dispaly 282080-1			
1	GND	BK-095	U
2	Dispaly PWR	RD-096	PG-21

X2 DJ7021-6.3-21			
1	GND	BK-097	U
2	A/C PWR	RD-098	PJ-6

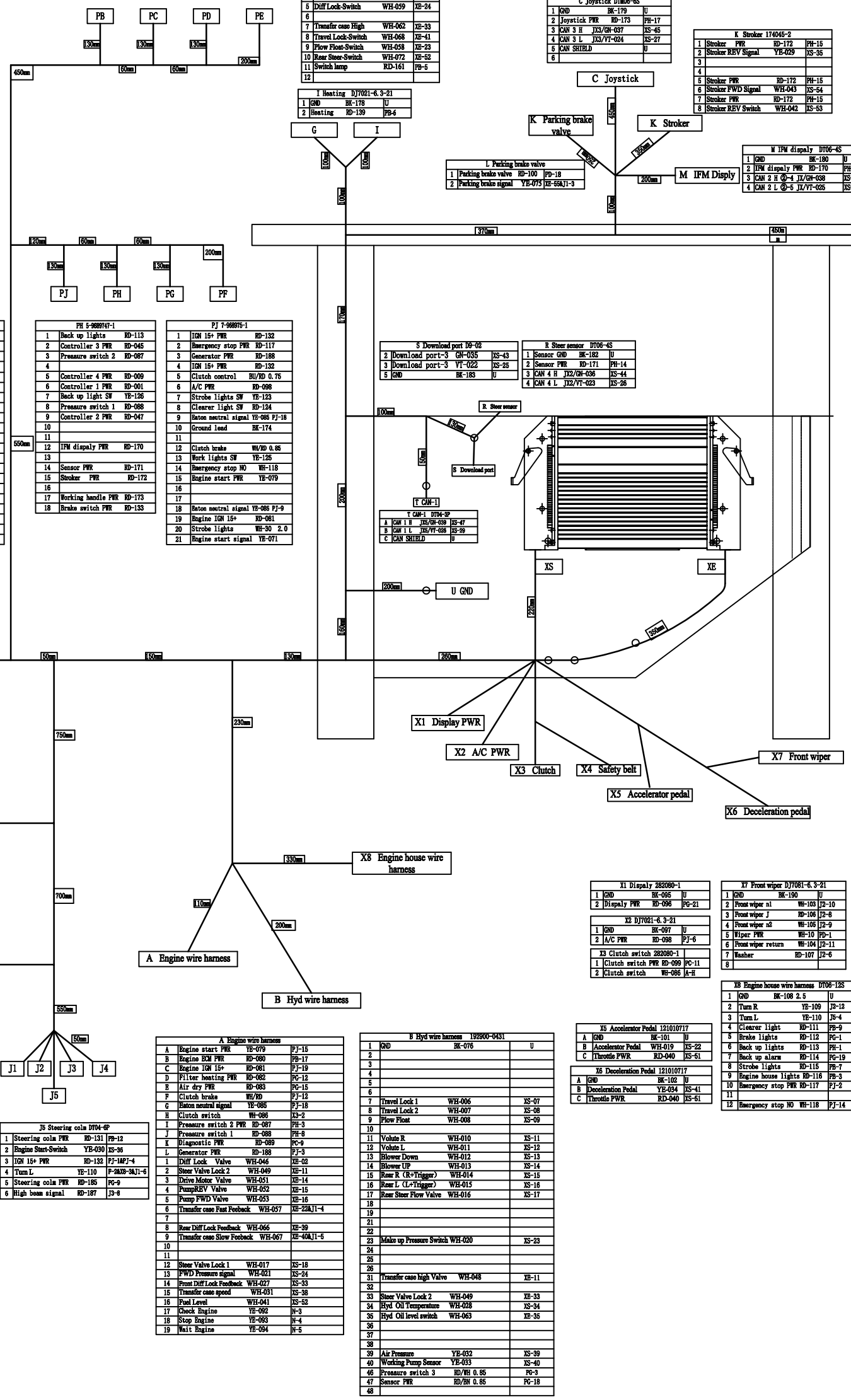
X3 Clutch switch 282080-1			
1	Clutch switch PWR	RD-099	PC-11
2	Clutch switch	WH-086	A-H

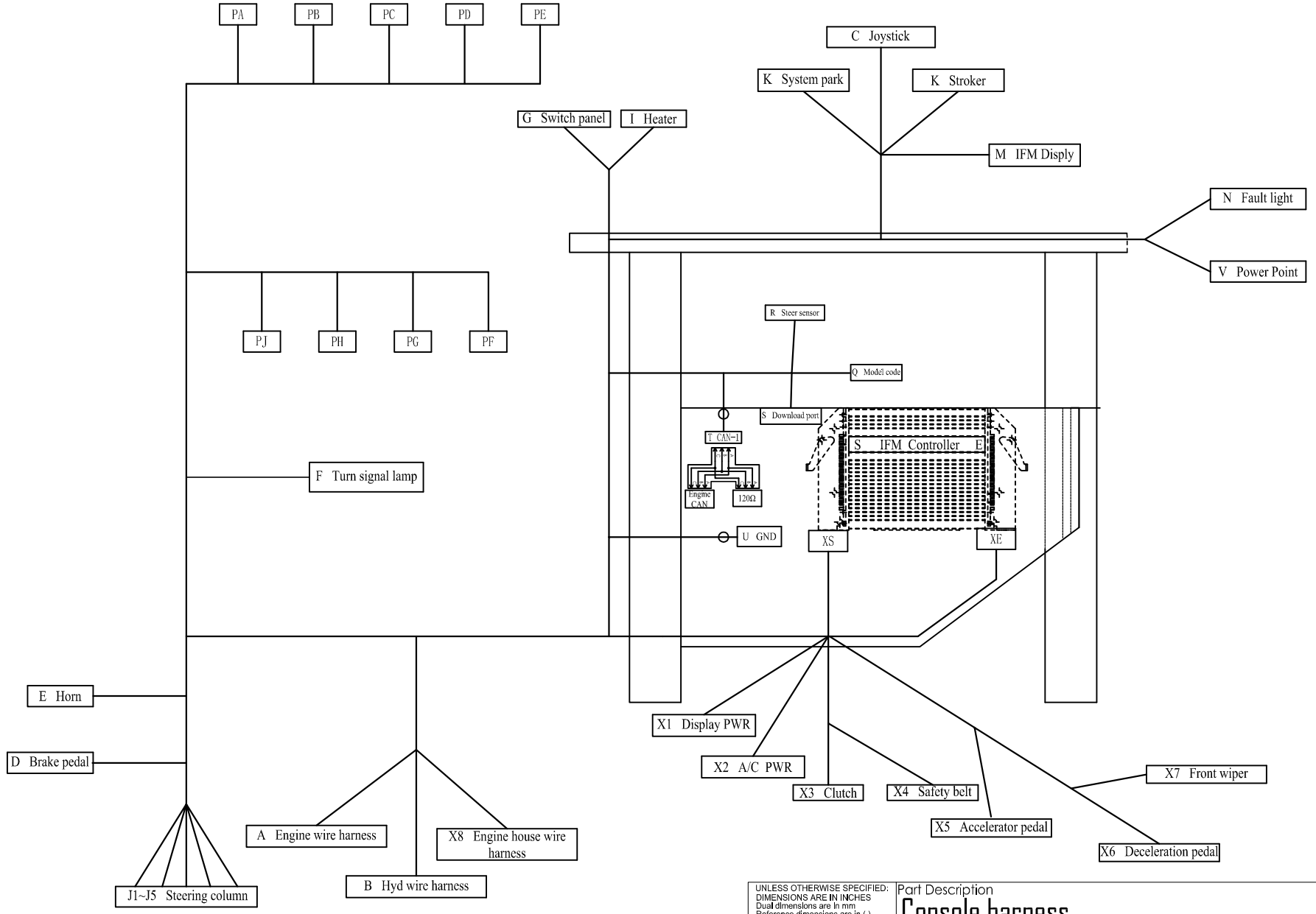
X5 Accelerator Pedal 121010717			
A	GND	BK-101	U
B	Accelerator Pedal	WH-019	XS-22
C	Throttle PWR	RD-040	XS-51

X6 Deceleration Pedal 121010717			
A	GND	BK-102	U
B	Deceleration Pedal	YE-034	XS-41
C	Throttle PWR	RD-040	XS-51

X7 Front wiper DJ7061-6.3-21			
1	GND	BK-190	U
2	Front wiper n1	WH-103	J2-10
3	Front wiper J	RD-106	J2-8
4	Front wiper n2	WH-105	J2-9
5	Wiper PWR	WH-10	PD-1
6	Front wiper return	WH-104	J2-11
7	Washer	RD-107	J2-6
8			

X8 Engine house wire harness DT06-12S			
1	GND	BK-108 2.5	U
2	Turn R	YE-109	J2-12
3	Turn L	YE-110	J5-4
4	Clearer light	RD-111	PB-9
5	Brake lights	RD-112	PG-1
6	Back up lights	RD-113	PH-1
7	Back up alarm	RD-114	PG-19
8	Strobe lights	RD-115	PB-7
9	Engine house lights	RD-116	PB-3
10	Emergency stop PWR	RD-117	PJ-2
11			
12	Emergency stop NO	WH-118	PJ-14





KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH±0.5° BEND±2°
Machined/Drilled Holes: ±0.01

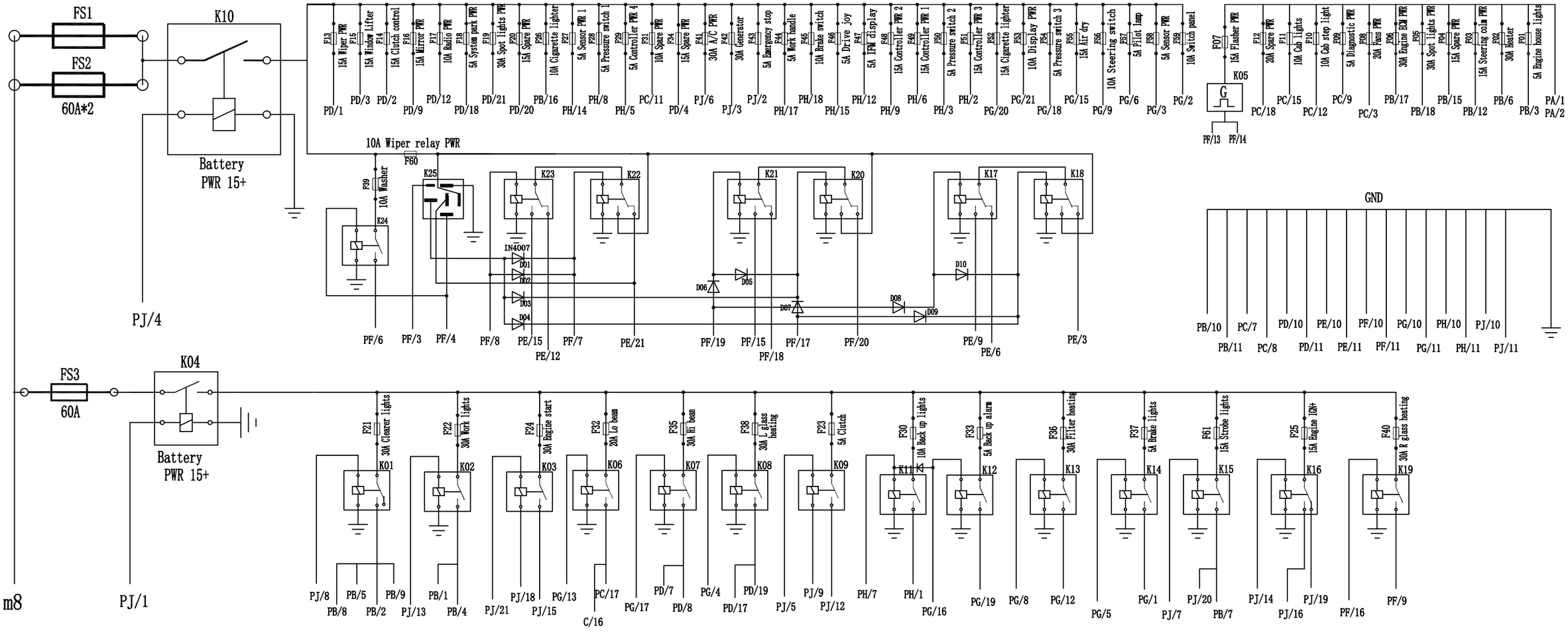
All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Console harness

Part Number
550S-0901002

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1



PB 9-968974-2		
1	Work lights	WT-45 2.0
2	Clearer light	WT-48 1.5
3	Engin house lights	RD-116
4		
5	Switch lamp	RD-161
6	Heating	RD-139
7	Strobe lights	RD-115
8		
9	Clearer light	RD-111
10	Ground lead	BK-140
11		
12	Steering colm PWR	RD-131
13		
14		
15		
16	Cigarette lighter	WT-19 2.5
17	Engine ECM PWR	RD-080
18		

PC 8-968974-1		
1		
2		
3	Fans PWR	WT-9+11 1.25
4		
5		
6		
7		
8		
9	Diagnostic PWR	RD-089
10		
11	Clutch switch PWR	RD-099
12	Cab step light	WH-6 1.5
13		
14		
15	Cab lights	WH-7+12 2.0
16	Lo Beam	WH-46 2.0
17		
18		

PD 5-968975-1		
1	Wiper PWR	WH-10 2.5
2	Clutch control	BU/RD 0.75
3	Windows motor	WH-3 2.0
4		
5		
6		
7	Hi beam	WH-47 2.0
8		
9	Mirorr PWR	WH-2 2.0
10		
11		
12	Radio PWR	WH-1 1.25
13		
14		
15		
16		
17	L glass heating	WT-17 3.0
18	Syatem park PWR	RD-100
19		
20		
21	Spot lights PWR	WT-13 2.0

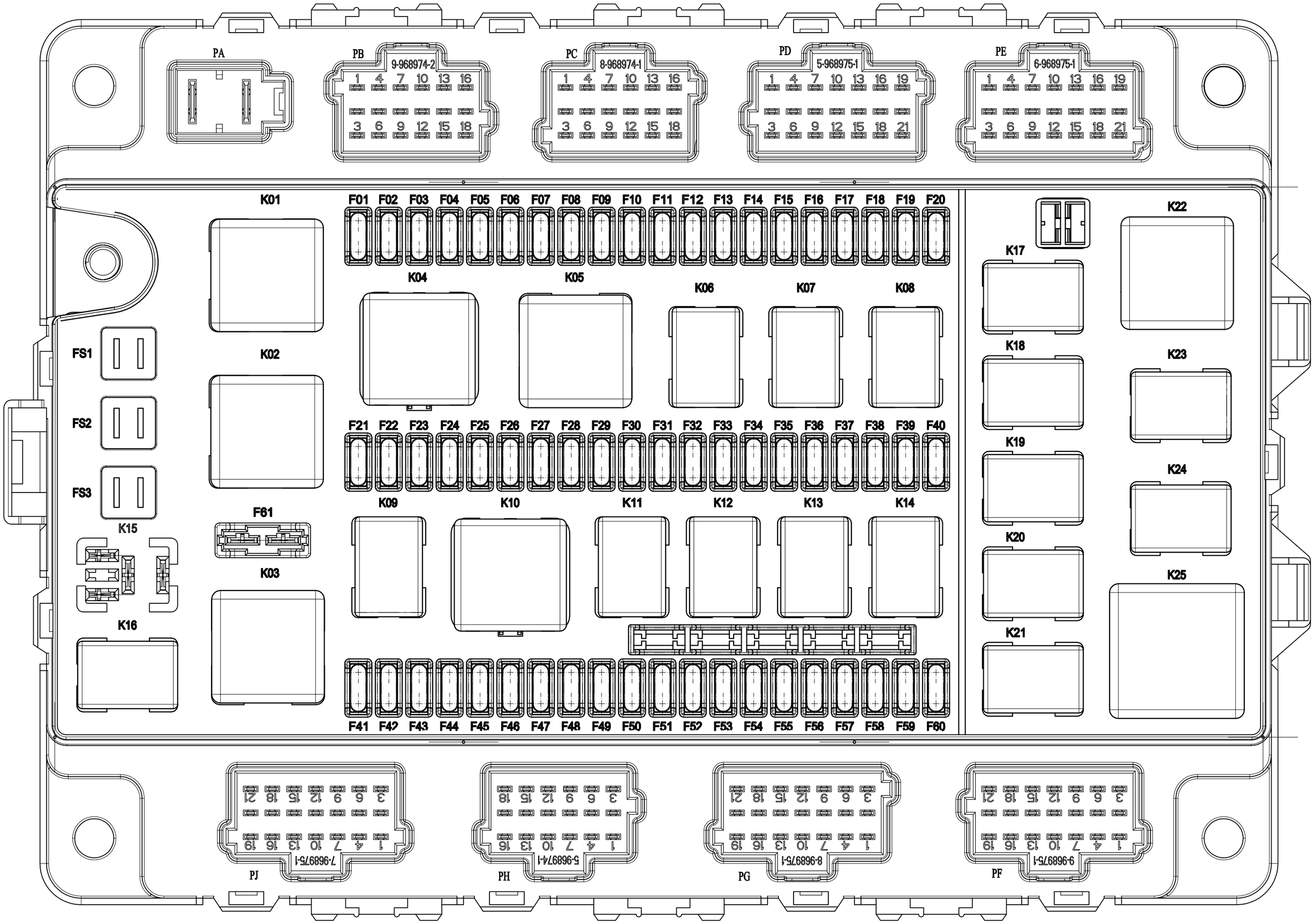
PE 6-968975-1		
1		
2		
3	R wipe motor park	WH-RF 1.5
4		
5		
6	R wiper motor n1	WH-RL 1.5
7		
8		
9	R wiper motor n2	WH-RH 1.5
10		
11		
12		
13		
14		
15		
16		
17		
18		
19		
20		
21		

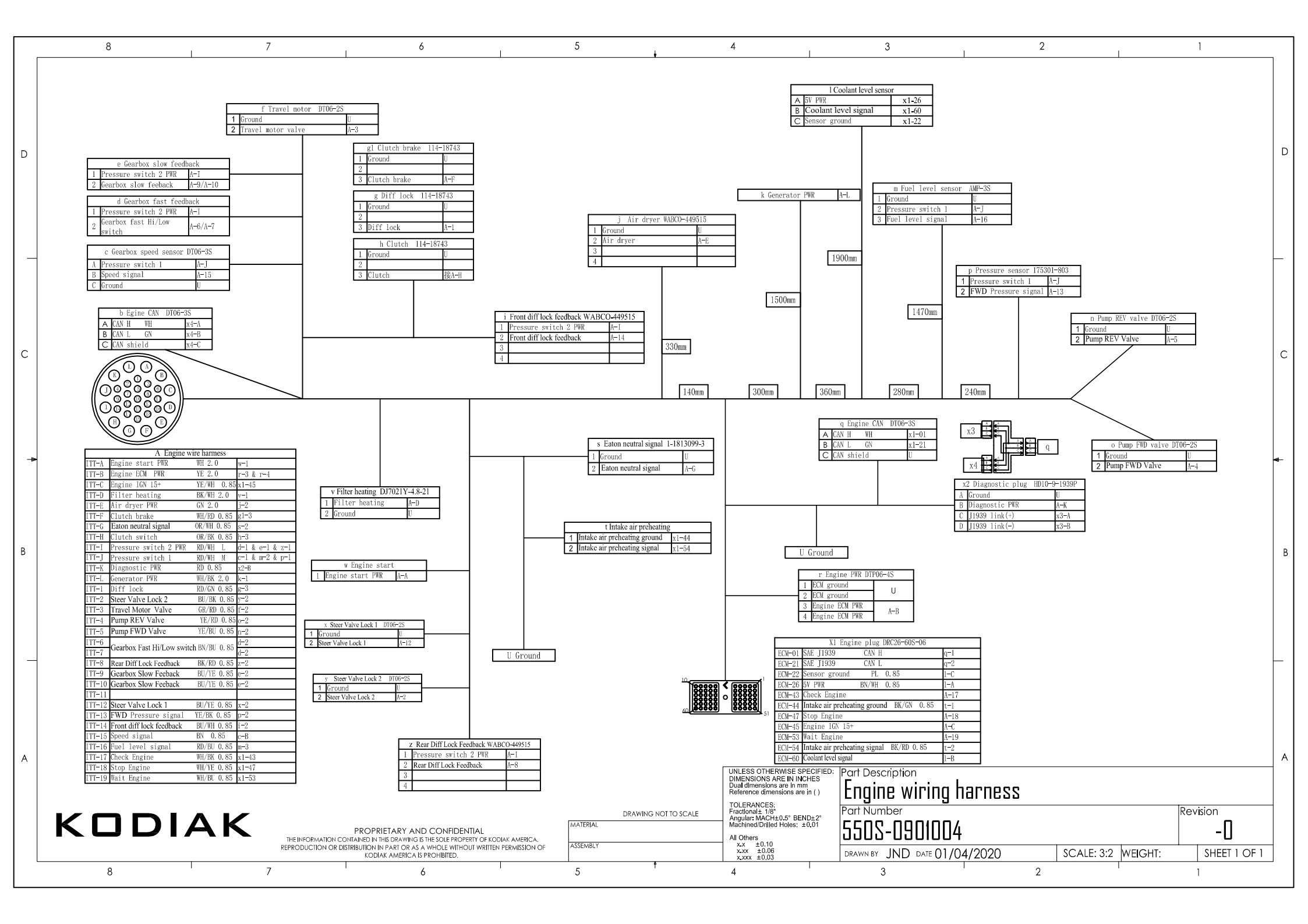
PF 9-968975-2		
1		
2		
3	M intermittence	RD-106 1.0
4	Washer	RD-107 1.0
5		
6	Washer pump	WH-7+9 1.5
7		
8		
9	R glass heating	WH-28 3.0
10		
11		
12		
13	Flash PWR	RD-121 1.0
14		
15	L wiper motor n2	WH-LH 1.5
16	Window heating	PG-4
17	Side wiper n1	RD-128 1.0
18	L wiper motor m1	WH-LL 1.5
19	Side wiper n2	RD-129 1.0
20	L wiper motor park	WH-LF 1.5
21		

PG 8-968975-1		
1	Brake lights	RD-112
2	Switchs PWR	RD-166
3	Sensor PWR	RD-077
4	Windows heating SW	YE-127
5	Brake signal	YE-064
6	Lamp PWR	RD-167
7		
8	Clutch control	BU/RD 0.75
9	Steering colm PWR	RD-185
10	Ground lead	BK-185
11		
12	Filter heating PWR	RD-082
13	Lo beam signal	YE-119
14		
15	Air dry PWR	RD-083
16	IFM Back up alarm	YE-061
17	Hi beam signal	YE-120
18	Preaaure switch 3	RD-078
19	Back up alarm	RD-114
20	Clearer light	RD-169
21	Dispaly PWR	RD-096

PH 5-9689747-1		
1	Back up lights	RD-113
2	Controller 3 PWR	RD-045
3	Preaaure switch 2	RD-087
4		
5	Controller 4 PWR	RD-009
6	Controller 1 PWR	RD-001
7	Back up light SW	YE-126
8	Preaaure switch 1	RD-088
9	Controller 2 PWR	RD-047
10		
11		
12	IFM dispaly PWR	RD-170
13		
14	Sensor PWR	RD-171
15	Drive handle PWR	RD-172
16		
17	Working handle PWR	RD-173
18	Brake switch PWR	RD-133

PJ 7-968975-1		
1	IGN 15+ PWR	RD-132
2	Emergency stop PWR	RD-117
3	Generator PWR	RD-188
4	IGN 15+ PWR	RD-132
5	Clutch control	BU/RD 0.75
6	A/C PWR	RD-098
7	Strobe lights SW	YE-123
8	Clearer light SW	RD-124
9	Eaton neutral signal	YE-085 PJ-18
10	Ground lead	BK-174
11		
12	Clutch brake	WH/RD 0.85
13	Work lights SW	YE-125
14	Emergency stop NO	WH-118
15	Engine start PWR	YE-079
16		
17		
18	Eaton neutral signal	YE-085 PJ-9
19	Engine IGN 15+	RD-081
20	Strobe lights	WH-30 2.0
21	Engine start signal	YE-071


PA
PB
9-968974-2
1 4 7 10 13 16
3 6 9 12 15 18
PC
8-968974-1
1 4 7 10 13 16
3 6 9 12 15 18
PD
5-968975-1
1 4 7 10 13 16 19
3 6 9 12 15 18 21
PE
6-968975-1
1 4 7 10 13 16 19
3 6 9 12 15 18 21
K01
K02
K03
K04
K05
K06
K07
K08
K09
K10
K11
K12
K13
K14
K15
K16
K17
K18
K19
K20
K21
K22
K23
K24
K25
FS1
FS2
FS3
F61
F01 F02 F03 F04 F05 F06 F07 F08 F09 F10 F11 F12 F13 F14 F15 F16 F17 F18 F19 F20
F21 F22 F23 F24 F25 F26 F27 F28 F29 F30 F31 F32 F33 F34 F35 F36 F37 F38 F39 F40
F41 F42 F43 F44 F45 F46 F47 F48 F49 F50 F51 F52 F53 F54 F55 F56 F57 F58 F59 F60
PJ
7-968975-1
PH
5-968974-1
PG
8-968975-1
PF
9-968975-1


f Travel motor DT06-2S
1 Ground U
2 Travel motor valve A-3
gl Clutch brake 114-18743
1 Ground U
2
3 Clutch brake A-F
g Diff lock 114-18743
1 Ground U
2
3 Diff lock A-1
h Clutch 114-18743
1 Ground U
2
3 Clutch 接A-H
e Gearbox slow feedback
1 Pressure switch 2 PWR A-I
2 Gearbox slow feeback A-9/A-10
d Gearbox fast feedback
1 Pressure switch 2 PWR A-I
2 Gearbox fast Hi/Low switch A-6/A-7
c Gearbox speed sensor DT06-3S
A Pressure switch 1 A-J
B Speed signal A-15
C Ground U
b Egine CAN DT06-3S
A CAN H WH x4-A
B CAN L GN x4-B
C CAN shield x4-C
l Coolant level sensor
A 5V PWR x1-26
B Coolant level signal x1-60
C Sensor ground x1-22
k Generator PWR A-L
j Air dryer WABCO-449515
1 Ground U
2 Air dryer A-E
3
4
m Fuel level sensor AMP-3S
1 Ground U
2 Pressure switch 1 A-J
3 Fuel level signal A-16
p Pressure sensor 175301-803
1 Pressure switch 1 A-J
2 FWD Pressure signal A-13
n Pump REV valve DT06-2S
1 Ground U
2 Pump REV Valve A-5
i Front diff lock feedback WABCO-449515
1 Pressure switch 2 PWR A-I
2 Front diff lock feedback A-14
3
4
1900mm
1500mm
1470mm
330mm
140mm
300mm
360mm
280mm
240mm
q Engine CAN DT06-3S
A CAN H WH x1-01
B CAN L GN x1-21
C CAN shield U
x3
x4
q
o Pump FWD valve DT06-2S
1 Ground U
2 Pump FWD Valve A-4
x2 Diagnostic plug HD10-9-1939P
A Ground U
B Diagnostic PWR A-K
C J1939 link(+) x3-A
D J1939 link(-) x3-B
s Eaton neutral signal 1-1813099-3
1 Ground U
2 Eaton neutral signal A-G
v Filter heating DJ7021Y-4.8-21
1 Filter heating A-D
2 Ground U
t Intake air preheating
1 Intake air preheating ground x1-44
2 Intake air preheating signal x1-54
U Ground
w Engine start
1 Engine start PWR A-A
r Engine PWR DTP06-4S
1 ECM ground U
2 ECM ground
3 Engine ECM PWR A-B
4 Engine ECM PWR
x Steer Valve Lock 1 DT06-2S
1 Ground U
2 Steer Valve Lock 1 A-12
y Steer Valve Lock 2 DT06-2S
1 Ground U
2 Steer Valve Lock 2 A-2
U Ground
z Rear Diff Lock Feedback WABCO-449515
1 Pressure switch 2 PWR A-I
2 Rear Diff Lock Feedback A-8
3
4
X1 Engine plug DRC26-60S-06
ECM-01 SAE J1939 CAN H q-1
ECM-21 SAE J1939 CAN L q-2
ECM-22 Sensor ground PL 0.85 1-C
ECM-26 5V PWR BN/WH 0.85 1-A
ECM-43 Check Engine A-17
ECM-44 Intake air preheating ground BK/GN 0.85 t-1
ECM-47 Stop Engine A-18
ECM-45 Engine IGN 15+ A-C
ECM-53 Wait Engine A-19
ECM-54 Intake air preheating signal BK/RD 0.85 t-2
ECM-60 Coolant level signal 1-B
A Engine wire harmess
ITT-A Engine start PWR WH 2.0 w-1
ITT-B Engine ECM PWR YE 2.0 r-3 & r-4
ITT-C Engine IGN 15+ YE/WH 0.85 x1-45
ITT-D Filter heating BK/WH 2.0 v-1
ITT-E Air dryer PWR GN 2.0 j-2
ITT-F Clutch brake WH/RD 0.85 gl-3
ITT-G Eaton neutral signal OR/WH 0.85 s-2
ITT-H Clutch switch OR/BK 0.85 h-3
ITT-I Pressure switch 2 PWR RD/WH L d-1 & e-1 & z-1
ITT-J Pressure switch 1 RD/WH M c-1 & m-2 & p-1
ITT-K Diagnostic PWR RD 0.85 x2-B
ITT-L Generator PWR WH/BK 2.0 k-1
ITT-1 Diff lock RD/GN 0.85 g-3
ITT-2 Steer Valve Lock 2 BU/BK 0.85 y-2
ITT-3 Travel Motor Valve GR/RD 0.85 f-2
ITT-4 Pump REV Valve YE/RD 0.85 o-2
ITT-5 Pump FWD Valve YE/BU 0.85 n-2
ITT-6 Gearbox Fast Hi/Low switch BN/BU 0.85 d-2
ITT-7 d-2
ITT-8 Rear Diff Lock Feedback BK/RD 0.85 z-2
ITT-9 Gearbox Slow Feeback BU/YE 0.85 e-2
ITT-10 Gearbox Slow Feeback BU/YE 0.85 e-2
ITT-11
ITT-12 Steer Valve Lock 1 BU/YE 0.85 x-2
ITT-13 FWD Pressure signal YE/BK 0.85 p-2
ITT-14 Front diff lock feedback BU/WH 0.85 i-2
ITT-15 Speed signal BN 0.85 c-B
ITT-16 Fuel level signal RD/BU 0.85 m-3
ITT-17 Check Engine WH/BK 0.85 x1-43
ITT-18 Stop Engine WH/YE 0.85 x1-47
ITT-19 Wait Engine WH/BU 0.85 x1-53
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DRAWING NOT TO SCALE
MATERIAL
ASSEMBLY
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )
TOLERANCES:
Fractional± 1/8"
Angular: MACH±0.5° BEND±2°
Machined/Drilled Holes: ±0.01
All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03
Part Description
Engine wiring harness
Part Number
550S-0901004
Revision
-0
DRAWN BY JND DATE 01/04/2020
SCALE: 3:2
WEIGHT:
SHEET 1 OF 1

T Travel Lock 2 DT06-2S		
1	Ground	B-1
2	Travel Lock 2	B-8

XE Air Pressure		
1	Pressure switch 3	B-46
2	Air Pressure	B-39

XK Snow Guide L DT06-2S		
1	Ground	B-1
2	Snow Guide L	B-12

XM Gearbox Hight Valve DT06-2S		
1	Ground	B-1
2	Gearbox Hight Valve	B-33

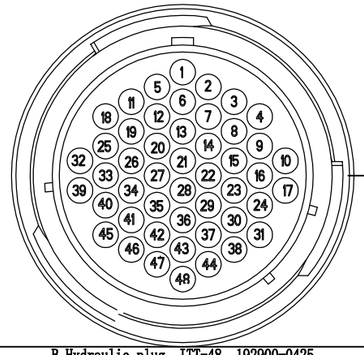
XS Travel Lock 1 DT06-2S		
1	Ground	B-1
2	Travel Lock 1	B-7

F Plow Float-Switch		
1	Sensor PWR	B-47
2	Plow Float-Switch	B-23

XQ Blower UP DT06-2S		
1	Ground	B-1
2	Blower UP	B-14

XR Plow Float DT06-2S		
1	Ground	B-1
2	Plow Float	B-9

XL Snow Guide R DT06-2S		
1	Ground	B-1
2	Snow Guide R	B-11



B Hydraulic plug ITT-48 192900-0425			
1	Ground	BK	
2			
3			
4			
5			
6			
7	Travel Lock 1	WH/GR 0.85	XS-2
8	Travel Lock 2	WH/YE 0.85	XT-2
9	Plow Float	WH/BK 0.85	XR-2
10			
11	Snow Guide R	OR/BL 0.85	XL-2
12	Snow Guide L	OG/WH 0.85	XK-2
13	Blower Down	BN/YE 0.85	XP-2
14	Blower UP	BN/WH 0.85	XQ-2
15	Rear R (R+Switch)	YE/WH 0.85	XH-4
16	Rear L (L+Switch)	YE/BK 0.85	XH-1
17	Rear Steer Flow Valve	BU 0.85	XG-2
18			
19			
21			
22			
23	Plow Float-Switch	BU/BK 0.85	XF-2
24			
25			
26			
31	Gearbox Low Valve	GN/BK 0.85	XM-2
32			
33	Gearbox Hight Valve	GN/WH 0.85	XN-2
34	Hyd Oil Temperature	BU/YE 0.85	XD-2
35	Hyd Oil level switch	WH/RD 0.85	XC-2
36			
37			
38			
39	Air Pressure	BU/WH 0.85	XE-3
40	Working Pump Sensor	BU/RD 0.85	XJ-3
46	Pressure switch 3	RD/WH 0.85	XD-1&XE-2&XJ-1
47	Sensor PWR	RD/BN 0.85	XC-1&XF-1
48			

XC Hyd Oil level switch AMP-2S		
1	Sensor PWR	B-47
2	Hyd Oil level switch	B-35

XP Blower Down DT06-2S		
1	Ground	B-1
2	Blower Down	B-13

XD Hyd Oil Temperature AMP-2S		
1	Pressure switch 3	B-46
2	Hyd Oil Temperature	B-34

J Working Pump Sensor AMP-3S		
1	Pressure switch 3	B-46
2	Working Pump Sensor	B-40

XN Gearbox Low Valve DT06-2S		
1	Ground	B-1
2	Gearbox Low Valve	B-31

XH Steer rear PVG DT06-4S		
1	Rear L (L+Switch)	B-16
2	Ground	B-1
3	Ground	B-1
4	Rear R (R+Switch)	B-15

XG Rear Steer Flow Valve DT06-2S		
1	Ground	B-1
2	Rear Steer Flow Valve	B-17

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MATERIAL

ASSEMBLY

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Angular: MACH±0.5° BEND±2°
Machined/Drilled Holes: ±0.01

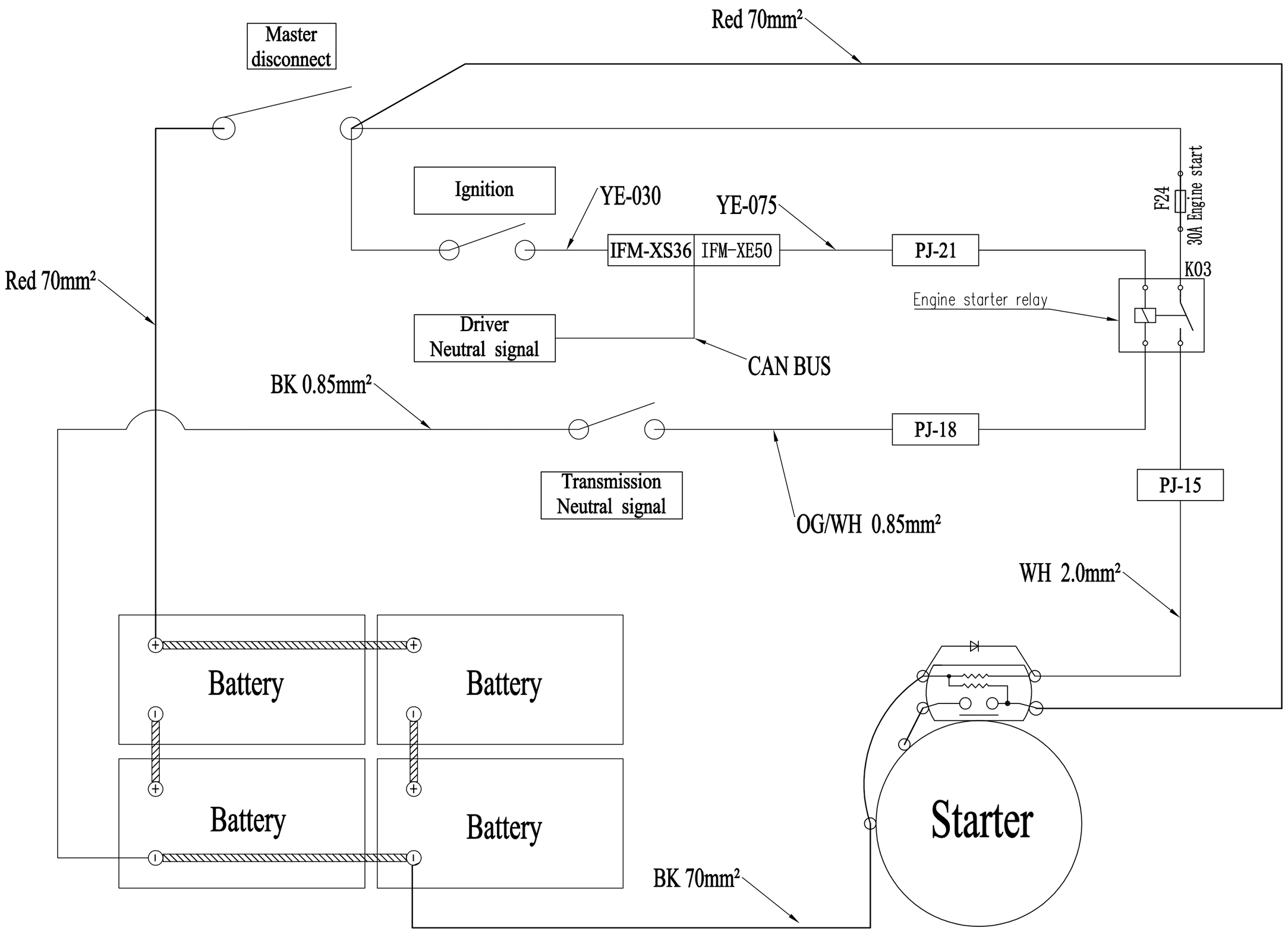
All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

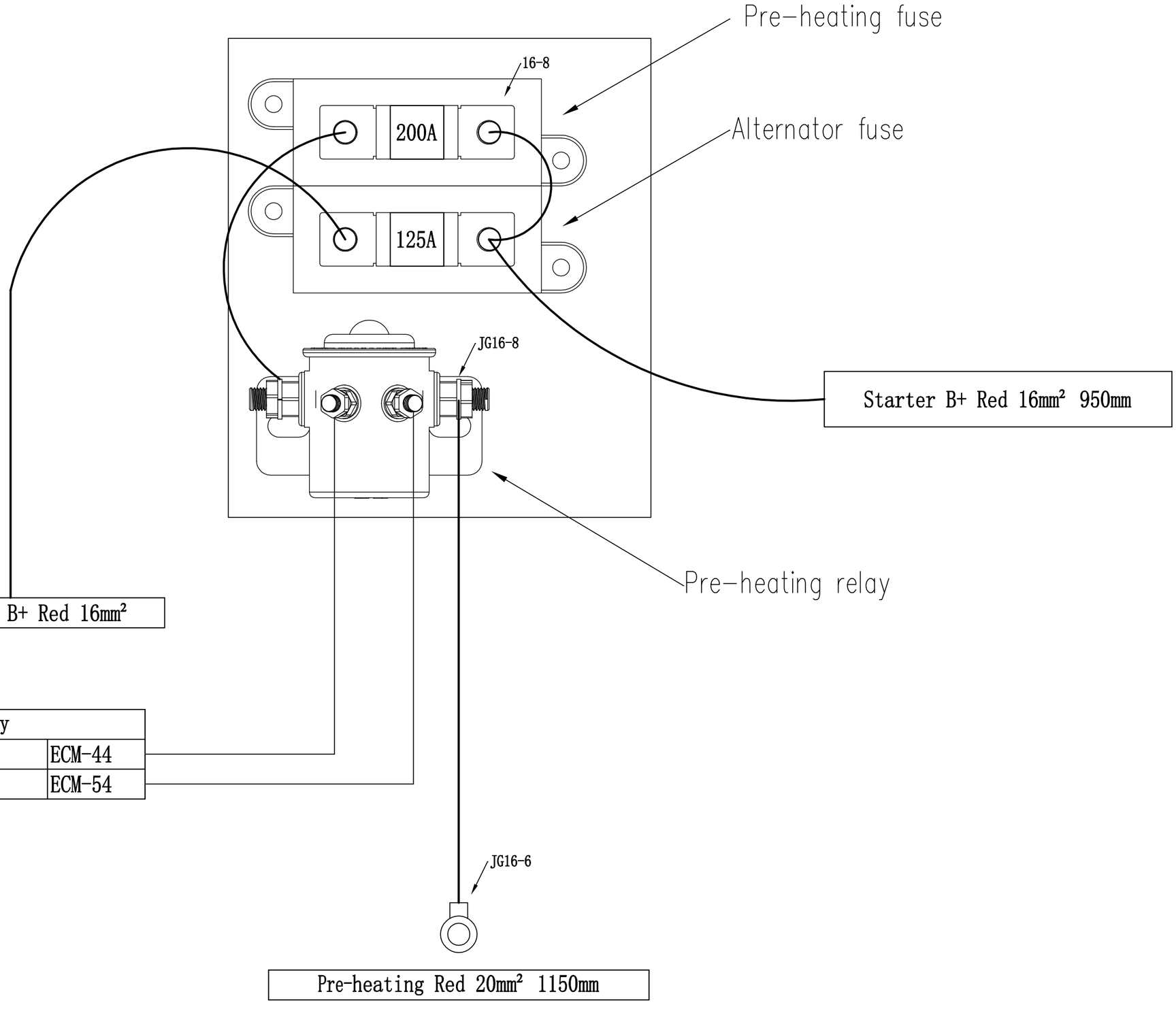
Part Description
Hydraulic wiring harness

Part Number
550S-0901005

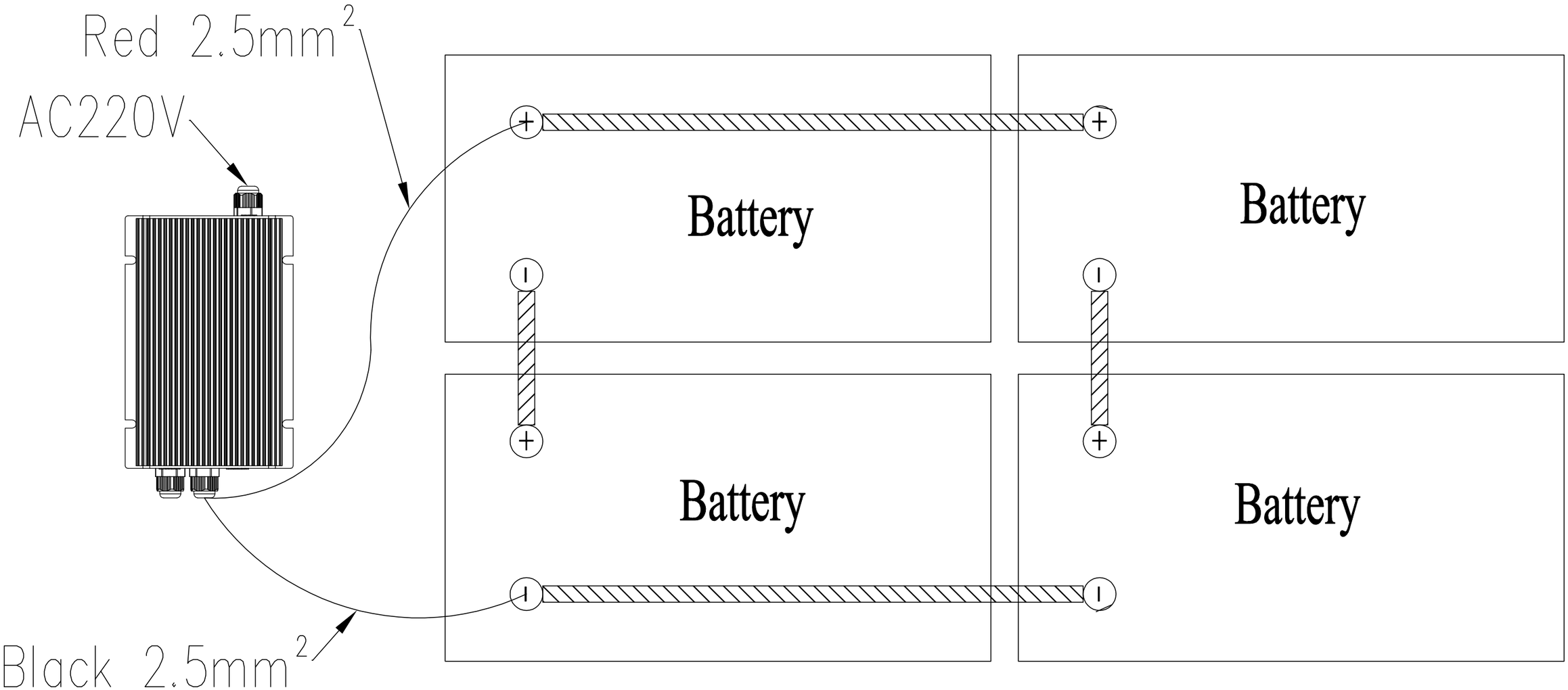
Revision
-0

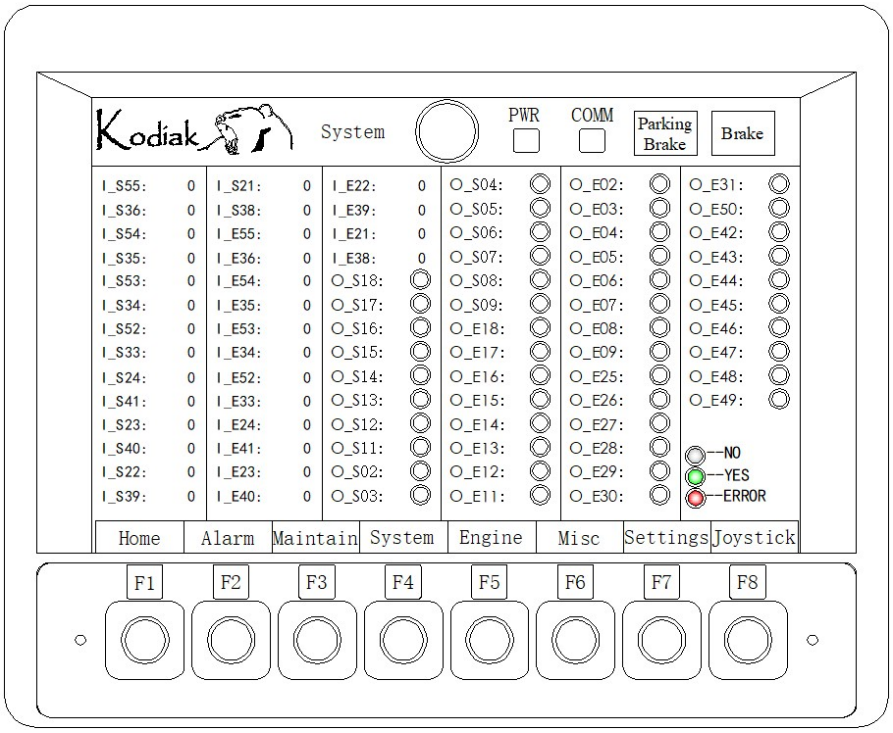
DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1


Master disconnect
Red 70mm²
Ignition
YE-030
YE-075
IFM-XS36
IFM-XE50
PJ-21
F24
30A Engine start
K03
Engine starter relay
Red 70mm²
Driver Neutral signal
CAN BUS
BK 0.85mm²
PJ-18
Transmission Neutral signal
PJ-15
OG/WH 0.85mm²
WH 2.0mm²
Battery
Battery
Battery
Battery
Starter
BK 70mm²

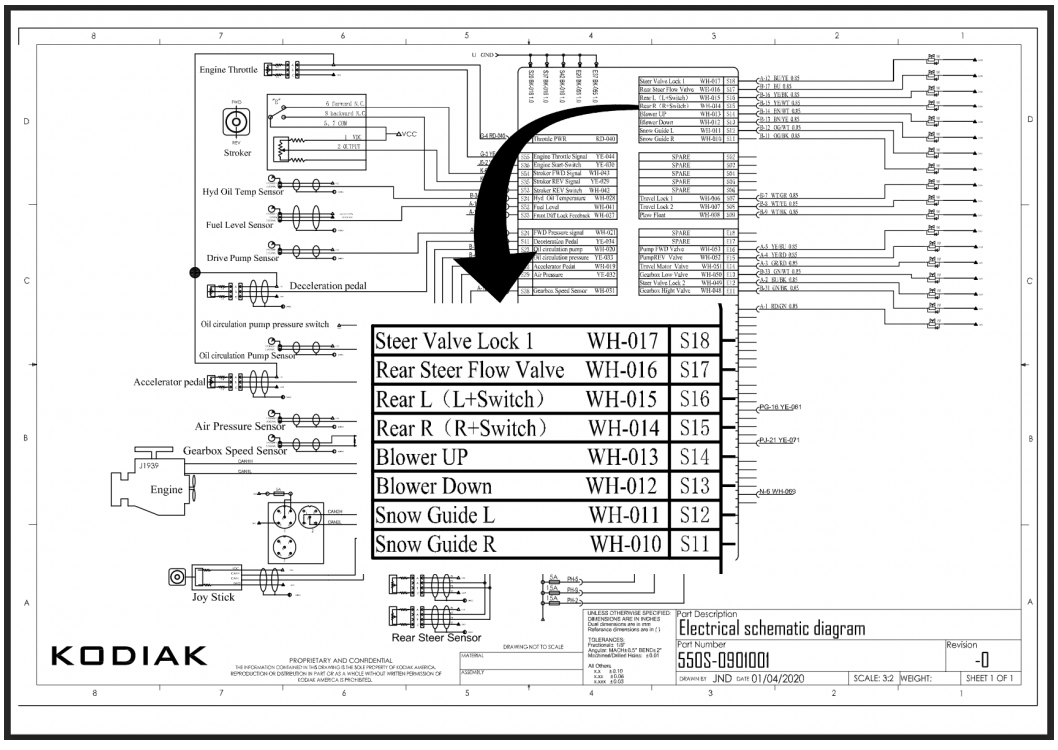


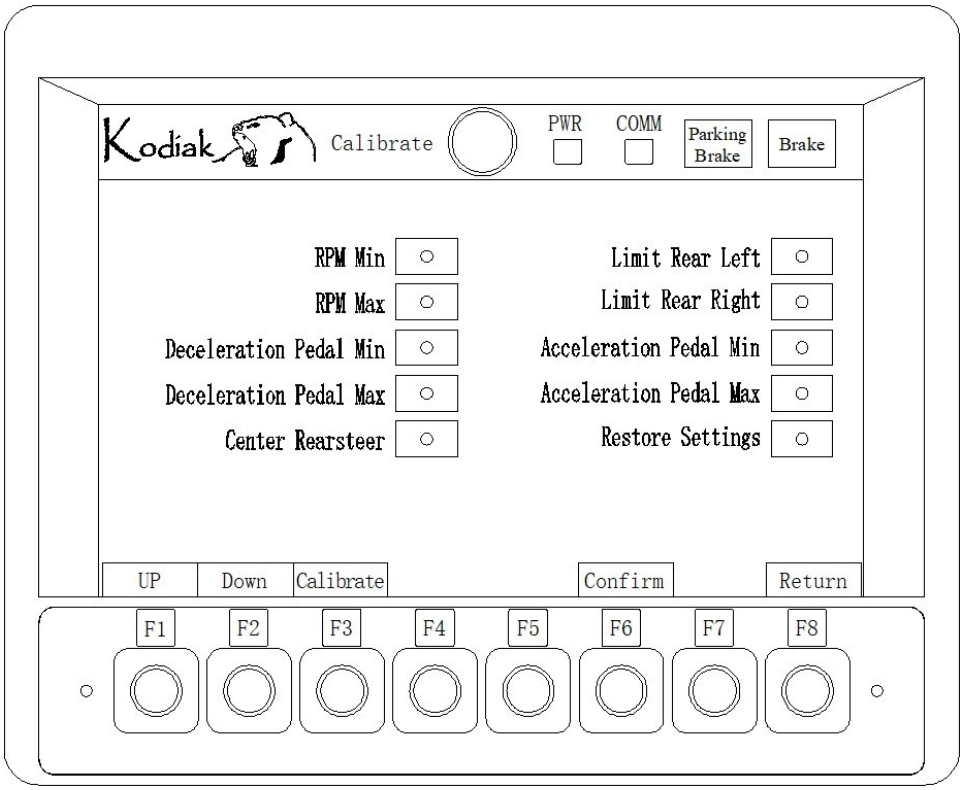
Intake heating relay			
1	Pre-heating GND	BK/GN 0.85	ECM-44
2	Pre-heating signal	BK/RD 0.85	ECM-54


Red 2.5mm²
AC220V
Battery
Battery
Battery
Battery
Black 2.5mm²



The numbers shown above on this screen correlate directly with the electrical schematic diagram in the maintenance manual. For example, if _S17 is red, you will know there is a fault in the “Rear Steer flow Valve”.

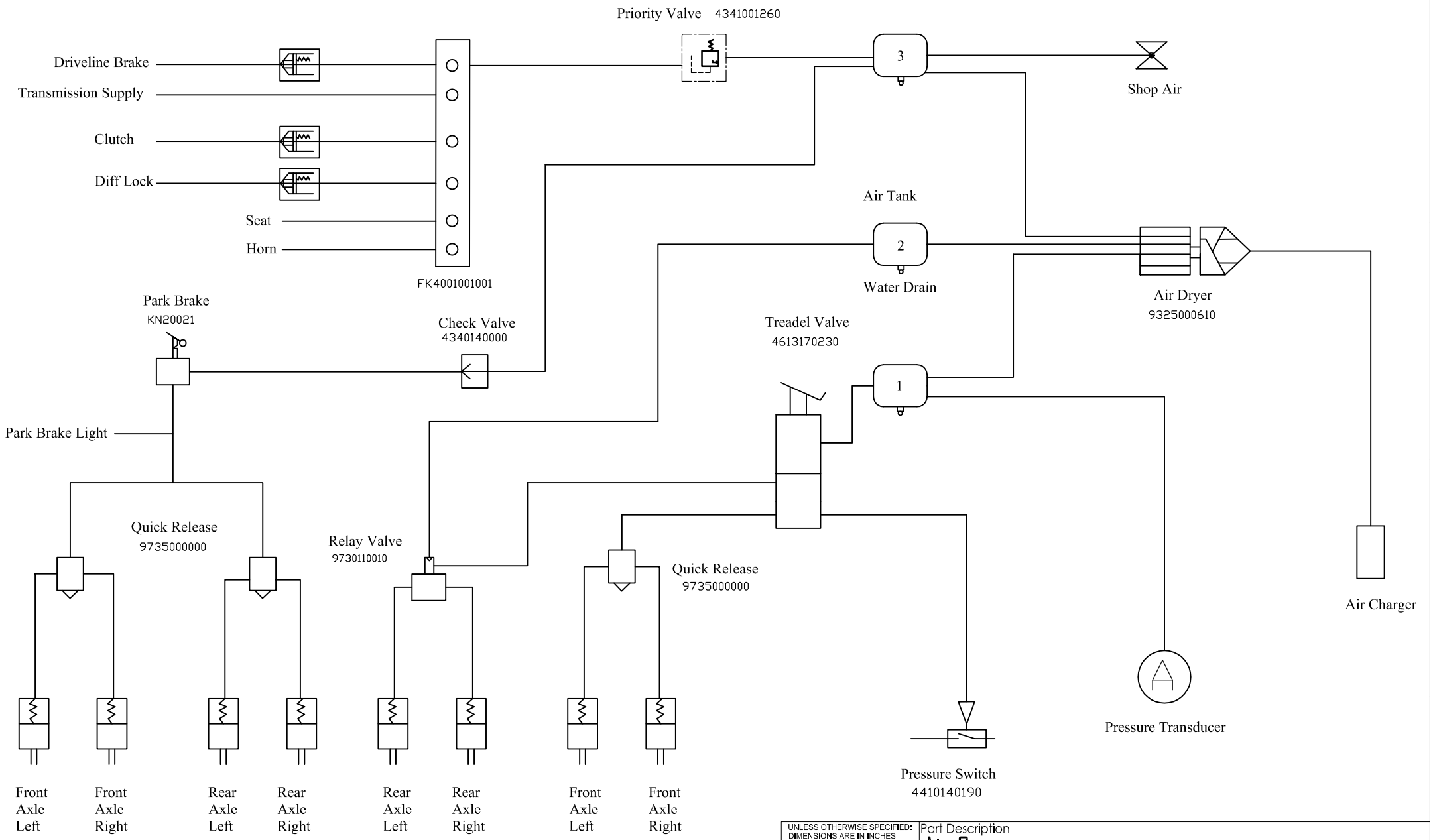





```
    G_WD_EngineSpeed_Potentiometer_Min_Factory : WORD:=  1540;
    G_WD_EngineSpeed_Potentiometer_Max_Factory : WORD:= 3188;
    G_WD_Decelerate_Padel_Min_Factory : WORD:= 1229;
    G_WD_Decelerate_Padel_Max_Factory : WORD:= 4434;
    G_WD_EngineSpeed_Padel_Min_Factory : WORD:= 1229;
    G_WD_EngineSpeed_Padel_Max_Factory : WORD:= 4434;
    G_WD_FrontWheelAngle_Middle_Factory : WORD:= 1841;
    G_WD_RearWheelAngle_Middle_Factory : WORD:= 1774;
    G_WD_RearWheelAngle_TurnLeftMax_Factory : WORD:= 1572;
    G_WD_RearWheelAngle_TurnRightMax_Factory : WORD:= 1970;
END_VAR

VAR_GLOBAL RETAIN PERSISTENT
    G_WD_EngineSpeed_Potentiometer_Min : WORD:=  1540;
    G_WD_EngineSpeed_Potentiometer_Max : WORD:= 3188;
    G_WD_Decelerate_Padel_Min : WORD:= 1229;
    G_WD_Decelerate_Padel_Max : WORD:= 4434;
    G_WD_EngineSpeed_Padel_Min : WORD:= 1229;
    G_WD_EngineSpeed_Padel_Max : WORD:= 4434;
    G_WD_FrontWheelAngle_Middle : WORD:= 1841;
    G_WD_RearWheelAngle_Middle : WORD:= 1774;
    R_WD_RearWheelAngle_TurnLeftMax : WORD:= 1572;
    R_WD_RearWheelAngle_TurnRightMax : WORD:= 1970;
END_VAR
```

Air System Schematics, models & diagrams



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Air System

Part Number
550S-0700000

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Part II

Part II Section 1. Maintenance

1.1 Maintenance Overview

- For replacement parts, grease and oil, be sure to use genuine Kodiak accessories or products approved by Kodiak.
- Do not mix different types of fluids when changing oil, coolant, or refueling. When changing different types of oil, all old oil must be drained and new oil must be completely filled. At the same time, the oil filter must be replaced.
    - A small amount of residual oil in the lines will not be affected by mixing with new oil
- Unless otherwise specified, the machine is shipped from the factory with the oil and coolant listed in the table below.

	Part	Brand of oil and fluid	Model of oil and fluid	Consumption per unit (L)
	gearbox	Mobil	80w-90 GL-5	13
	Transfer case	Mobil	80w-90 GL-5	2
	Transmission	Mobil	80w-90 GL-5	17
	Engine coolant	Mobil	Antifreeze - 45 ℃	54
	engine oil	Mobil	5W-40 CI-4	43
	Axle	Mobil	80w-90 GL-5	26
	Wheel planetary hub	Mobil	80w-90 GL-5	4.8
	Wiper		B-2075-80℃	3
	Hydraulic oil	Mobil	DTE 10 EXCEL 32	250-300L
	Grease	Mobil	xhp222	n/a

1.2 Oil

- The high temperature and high pressure of normal use on engine oils, hydraulic oils etc, caused degradation over time. Regular oil changes are required on this vehicle.
- Be sure to only use recommended oils in the operation and maintenance manual that match the maximum and minimum ambient temperature of your working environment.
- In the specified oil change cycle, even if the oil is not dirty, it should be changed.
- Prevent any impurities from entering the lubricating oil such as water, metal particles, dust, etc.)
    - Many faults with major components are caused by impurities.
    - Special care should be taken not to allow any impurities to enter during storage or refueling.
- It is normal and necessary to add oil to maintain a specified amount. Oil levels should be checked daily before and after operation
- Do not mix oils of different grades or grades.
- If the oil in the system is not clean, water or air will enter the oil circuit causing damage.
- When changing the oil, be sure to replace the relevant filter element. In addition, when changing the oil filter element, add clean oil that meets the requirements into the new filter element before installation.
- IUse only recommended hydraulic oil. Not doing so may cause the filter element to be plugged
- When changing the hydraulic oil, please remove the residual oil in the pipeline and oil cylinder as much as possible. A small amount of mixing will not cause adverse effects

1.3 Hydraulic Oil

- Hydraulic oil is essential to the hydraulic system. It is used to transfer, convert and control energy. At the same time, it also plays the role of lubrication, anti rust, anti-corrosion and cooling of the system. Maintaining clean oil is necessary for proper performance of the hydraulic system and the service life of the hydraulic components.
- The level of oil contamination should ALWAYS stay below NAS9. If it is higher than NAS9, the hydraulic oil mustl be replaced. The hydraulic oil requirements for the hydraulic system of the equipment are as follows:
    - The original hydraulic oil used is Mobil DTE 10 excel 32.
    - Hydraulic oil may be polluted in the process of transportation and storage.
    - Even newly bought hydraulic oil may look very clean, but in fact it can be "dirty". It must be kept still for several days, filtered and then added to the hydraulic system for use.
    - The oil leaked from the system shall not return to the oil tank without filtration and testing.
    - ISO code number = NAS number

ISO code number	Number of particles per ml	
	More than	Up to and including
22	20,000	40,000
21	10,000	20,000
20	5,000	10,000
19	2,500	5,000
18	1,300	2,500
17	640	1,300
16	320	640
15	160	320
14	80	160
13	40	80
12	20	40
11	10	20
10	5	10
09	2.5	5
08	1.3	2.5
07	0.64	1.3

- Please fill the hydraulic oil in strict accordance with the requirements. If the hydraulic oil does not meet the requirements or the hydraulic oil is not replaced in time, any warranty will be voided. Mobil brand hydraulic oil is recommended. If other brands of lubricating oil are used, Kodiak must be consulted prior to use.
- In order to judge the pollution degree of hydraulic oil, the usual evaluation method is to compare the oil to be evaluated with the clean new oil, and observe the difference of oil color, turbidity, dust and sediment. The following is a brief introduction to the simple assessment method used in the field.

Appearance color	**Smell**	**Pollution status**	**Treatment measures**
No change in transparency	normal	pollution-free	Continue to use
The transparent color turns pale	normal	Mix in other oils	If the viscosity is qualified, it can continue to use
Transparent and shiny	normal	Mixed with metal chips	Filter or change oil
Transparent with black spots	normal	Mixed with impurities	Filter or change oil
Dark brown	Smells bad	Oxidation impurity	Change all the oil
milky white	normal	Mix in air or water	Change all the oil

1.4 Fuel

- In order to prevent condensation from and forming in the fuel tank, the fuel tank must be filled after daily work.
- The fuel injection pump is a precision component. If the fuel used contains water or dirt, the fuel injection pump will not work normally.
- Drain any water from the fuel system before and 10 minutes after starting the engine.

- If there are any impurities in the fuel tank, flush the fuel tank and fuel system.
- If the engine has run out of fuel or if the filter element is replaced, the air in the system must be purged.
- Always use the fuel specified in the operation and maintenance manual.
- When the fuel is used above the specified temperature, the viscosity will decrease and the output power will decrease.
- When storing or filling fuel, pay special attention not to let impurities in.
- All fuel should be filtered prior to entering the fuel tank.

1.5 Coolant for the cooling system

- Coolant has important anti-corrosion and anti-freezing functions.
- Even in areas where antifreeze is not required, the use of antifreeze is essential.
- The engine is equipped with Mobil-45 Antifreeze. Mobil-45 Antifreeze has excellent anti-corrosion, anti-freezing and cooling characteristics.
- As a basic principle, we do not recommend the use of any other coolant.
- Natural water, such as river water and well water (hard water), contain minerals (calcium, magnesium, etc.), which is easy to scale inside the engine and radiator. Once the engine or radiator has internal scaling, it will be difficult to remove. Due to poor heat exchange and overheating, we do not recommend the use of self-made coolant.
- When using antifreeze, be sure to follow the precautions in this manual.
- Pure antifreeze is flammable and should be kept away from open fire.
- If the engine overheats due to lack of coolant, wait for the engine to cool down before adding coolant.
- If the coolant level is low, it will cause overheating, and as air enters the coolant, it will also cause corrosion problems.

1.6 Grease

- Kodiak recommends Mobil xhp222 grease.
- Grease is used to protect all joints, bearings and shafts.

- Grease not only lubricates sliding surfaces, but it also prevents the mixing of dust and water.
- If any parts appear inflexible or noisy after long-term use, check for abnormal wear. If the part is not damaged, add grease.
- Be sure to use the recommended grease, and follow the recommended replacement cycle and ambient temperature in this manual.
- Before adding new grease, wipe away the old grease.
- Be sure to wipe off the old grease where there is sand and dirt, otherwise the rotating parts will be worn.

1.7 Storage of oil and fuel

- Oil and fuel should be placed indoors to prevent water, dust or other debris from entering.
- When the oil barrel is stored for a long time, the oil barrel should be placed on the side so that the oil filling port of the oil barrel is on the side (to prevent moisture inhalation).
- If the oil drum has to be placed outdoors, cover it with tarpaulin or take other protective measures.

1.8 Filter element

- The filter element is an essential safety component, which can prevent any impurities in the oil circuit and gas circuit from entering the system and causing failure.
- Replace all filter elements regularly. Please refer to the relevant sections of this manual for details.
- When working in harsh conditions, the filter element should be replaced in a short period according to the sulfur content of all lubricating oils and fuels.
- Do not reuse filter elements, always replace it with a new one.

- When replacing the filter element, check whether there are metal particles adsorbed on the old filter element. If metal particles are found, please contact Kodiak or an authorized agent.
- Do not store filters without packaging.

1.9 Electrical system maintenance

- If the electrical equipment is wet or the cladding of the wire is damaged, it may cause an electrical short circuit and lead to machine failure. Do not flush the inside of the electrical cabinet with water. When washing the machine, be careful not to let water enter the electrical components.
- The external electromagnetic interference may cause failure of the control system. When installing radio receivers or other wireless devices, please contact Kodiak or its authorized agent.
- When installing electrical equipment, connect it with a dedicated power connector.
- Do not use mismatched fuses, starting switches or batteries.
- If you need to add new electrical components, please contact Kodiak or its authorized agent BEFORE INSTALLATION.
- Battery charging: vehicle charger can be used to charge the battery (AC 220 V). Please turn off the main power switch before charging to protect the electrical equipment.

Section 2: Lubrication

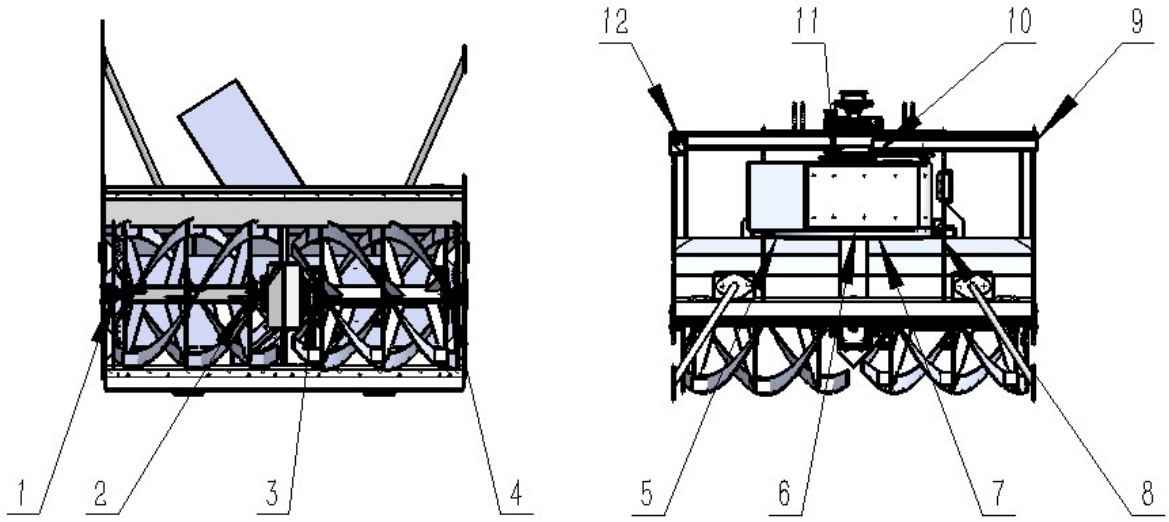
2.1 Manual lubrication

- There are 12 lubrication points on the head assembly, 56 lubrication points on the chassis making a total of 68 lubrication points.

- When using the grease gun to lubricate the lubricating point, make sure that the clamp head of the grease gun is in good contact with the oil cup (that is, the clamp head can be tightly stuck with the oil cup).
- In case of failure to inject oil, please check whether there is any problem with the chuck, and replace it in time if there is any problem. If there is no problem with the grease gun, please replace the oil cup and then inject oil. If the grease still cannot be injected, it means that the clearance between the pin shaft and the bushing is too small or there are impurities in the clearance between the pin shaft and the bushing. Rotate the pin shaft and inject grease at the same time, so that the grease can be injected.
- Every time lubrication is carried out, the clearance between pin shaft and bushing shall be subject to the overflow of clean grease.

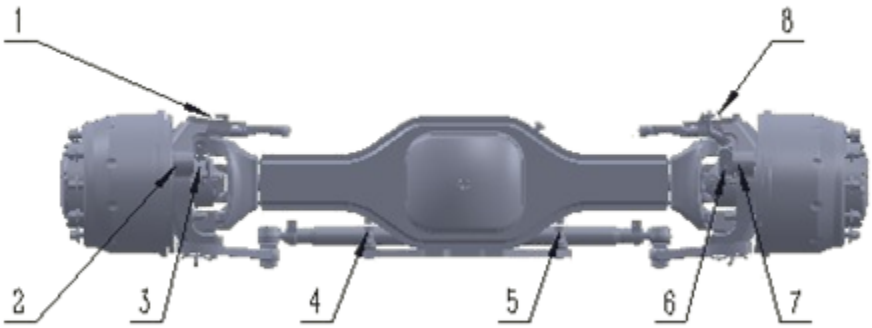
2.1.1 Blower head lubrication

- The blower head is a working part, which is used more frequently than other parts. Grease must be injected daily before operation otherwise the bearing or contact surface will be doubly worn leading to parts failure.
- Start the equipment after smearing oil in the chute, and then turn the snow throwing cylinder to make the oil in the chute spread evenly under the push of the slider.
- The following figure shows the specific location of the polishing head lubrication point.



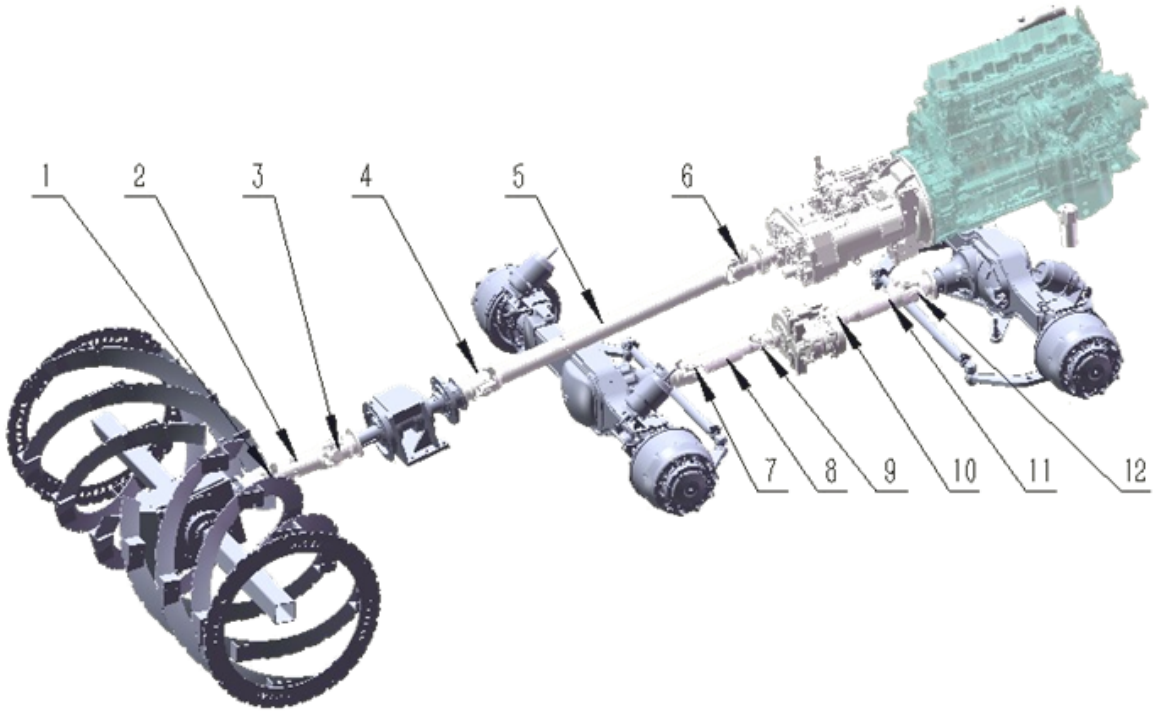
2.1.2 Chassis lubrication

- Chassis lubrication is divided into three parts:
    - axle assembly
    - transmission shaft
    - frame assembly.
- The lubricating points of the frame are hidden and the operation space is narrow.
- Please pay attention to all lubrication points.
- **Axle assembly**
    - There are 16 lubrication points in the axle assembly. The figure below shows the location of axle oil filling points.

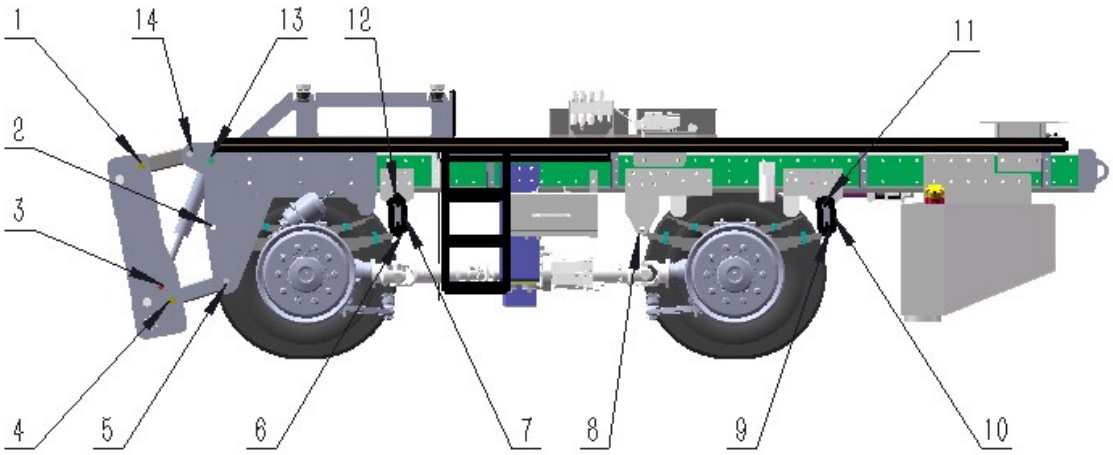


Driveline lubrication

- The transmission system assembly has 12 lubrication points. Grease the drivelines as shown below.



- **frame assembly**
    - The frame assembly has 28 lubrication points. The figure below shows the number of lubrication points on one side. The number of lubrication points on the other side is the same.



2.2 Selection standard of lubricating grease

- The selection of grease is related to speed, working temperature, load and ambient temperature. The grease recommended by Kodiak is Mobil grease xhp222.
- If you want to use a different grease, please contact Kodiak before using.

Section 3: Wear Items

- Wear items such as diesel filter element, shear bolts and air filter element should be replaced during maintenance or before reaching the wear limit.
- The following table is a list of the main vulnerable parts of the vehicle. In order to use the machine more economically, the vulnerable parts should be replaced correctly.
- For replacement parts, high quality genuine Kodiak parts should be used. When ordering parts, please contact Kodiak or an authorized agent.

Item	number	remarks
Shear bolt	6	Replace as needed
Oil filter	1	—
Oil water separator	1	—
Fuel filter element	2	Primary filtration and secondary filtration
Air filter element	2	Primary filtration and secondary filtration
Hydraulic system	3	Return oil filter element, drive pump filter element and hydraulic oil filter
Brake disc	1	—

Section 4: Maintenance Capacity Table

- Various oils are used according to the maintenance capacity table below. Too much oil may lead to equipment failure, harmful overflow, and too little oil may lead to insufficient lubrication and equipment failure. Please use Kodiak recommended oil when filling oil. The filling capacity is described in Table 4-1 below. The cycle below is every year or 250 hours of operation, whichever comes first.

Item	Part name	Brand of oil and fluid	Model of oil and fluid	Consumption per unit (L)	Note	Maintenance cycle year	remarks
1	gearbox	Mobil	80w-90 GL-5	13	Level hole	1	—
2	Transfer case	Mobil	80w-90 GL-5	2	Level hole	1	—
4	Transmission	Mobil	80w-90 GL-5	17	Level hole	2	—
5	Engine coolant	Mobil	Antifreeze -45 ℃	54	Liquid level to the middle of oil mirror	2	Including engine radiator, etc
6	engine oil	Mobil	5W-40 CI-4	43	Between A and F	1	
7	Axle	Mobil	80w-90 GL-5	26	Liquid level to the bottom of observation port	1	Single bridge 13L
8	Wheel planetary hub	Mobil	80w-90 GL-5	4.8	Liquid level to the bottom of observation port	1	Single wheel 1.2L
9	Glass detergent		B-2075-80 ℃	3	Top up	—	
10	Hydraulic oil	Mobil	DTE 10 EXCEL 32	300	Liquid level to window 2 / 3	1	

Section 5: Filter elements

All maintenance filter elements are summarized in the table below, along with the steps, maintenance cycle and precautions of replacing filter elements are described in detail in Section 9.

Item	Description	Model	Manufacturer	Quantity required	Maintenance cycle
1	Engine oil filter element	LF9080	Cummins	1	a year
2	Oil water separator	FS36230	Cummins	1	a year
3	Primary fuel filter	FS36260	Cummins	1	a year
4	Secondary fuel filtration	FF5687	Cummins	1	a year
5	Primary air filter element	AA2960	Cummins	1	One year / 3 times cleaning
6	Secondary air filter element	AF26434	Cummins	1	a year
7	Hydraulic oil filter	PBE0160F010N	Collins	1	a year
8	Hydraulic oil return filter element	FAX-400X20	Liming hydraulic	1	a year
9	Drive pump filter element	0009830643	Linde hydraulic	1	a year
10	Air dryer	4324102412	Wabco	1	One year or water discharged from the exhaust valve

Section 6: Torque Specifications

- During maintenance and regular use of the equipment, bolts and fasteners need to be replaced. When doing so it is necessary to use the specified torque value. In order to prevent the bolts, nuts, double head studs and other fasteners used in this vehicle from overload damage due to excessive force in the assembly process, and to establish a unified standard for the safe tightening of these fasteners, we have compiled the following tables.

Table 6-1 maximum tightening torque of threaded fasteners (metric system)

Thread size	Grade							
	4.8		8.8		10.9		12.9	
	Torque specifications							
	Nm	Lb.ft	Nm	Lb.ft	Nm	Lb. ft	Nm	Lb.ft
M1.6	–	–	0.20	0.15	–	–	0.20	0.15
M2.0	–	–	0.25	0.20	–	–	0.45	0.30
M2.5	–	–	1	0.75	–	–	1	0.75
M3.0	–	–	1	0.75	–	–	2	1.5
M3.5	–	–	2	1.5	–	–	3	2
M4.0	–	–	3	2	–	–	4	3
M5.0	–	–	5	4	–	–	8	6
M6.0	–	–	9	6	–	–	13	10
M9.0×1.25	–	–	21	15	27	20	32	23
M9.0×1.00	–	–	23	17	29	21	34	25

M10.0×1.50	–	–	42	31	54	39	63	46
M10.0×1.25	–	–	45	32	57	41	67	48
M12.0×1.75	–	–	74	53	94	68	110	80
M12.0×1.25	–	–	81	58	103	74	121	87
M14.0×2.00	–	–	118	85	151	109	176	127
M14.0×1.50	–	–	128	92	163	118	190	137
M16.0×2.00	169	122	–	–	234	169	274	197
M16.0×1.50	181	130	–	–	250	180	292	211
M19.0×2.50	234	169	–	–	323	234	378	273
M19.0×1.50	263	190	–	–	363	262	425	307
M20.0×2.50	330	239	–	–	457	330	531	386
M20.0×1.50	367	265	–	–	507	366	593	423
M22.0×2.50	451	325	–	–	623	450	728	526
M22.0×1.50	495	357	–	–	684	494	800	577
M24.0×3.00	571	412	–	–	790	570	923	667
M24.0×2.00	623	450	–	–	861	622	1007	727
M27.0×3.00	837	605	–	–	1158	836	1354	977
M27.0×2.00	903	652	–	–	1250	902	1461	1055
M30.0×3.00	1135	820	–	–	1570	1134	1835	1325
M30.0×2.00	1258	908	–	–	1740	1256	2034	1468
M30.0×1.50	1300	939	–	–	1799	1299	2102	1516
M36.0×4.00	1985	1433	–	–	2745	1982	3208	2317
M36.0×3.00	2102	1517	–	–	2907	2099	3398	2453

Note:

- The maximum tightening torque of standard bolts & nuts in this table is about 75% of the yield limit of material.
- All torque values in the table are relative to lubricated threads. The meaning of "lubrication" here includes the use of thread lubricant, cadmium plating or hardened washer.
- The torque values in the table are the recommended values for general fasteners. In practical application, the allowable tightening load has a variation of ± 10%.

Table 6-2 maximum tightening torque of threaded fasteners (SAE)

Thread size	Grade								With 12 point cap screws	
	GM 260-m steel SAE grade 2		GM 280-m steel SAE grade 5		GM 290-m steel SAE grade 7		GM 300-m steel SAE grade 8			
	Torque specifications									
	Nm	Lb.ft	Nm	Lb.ft	Nm	Lb.ft	Nm	Lb.ft	Nm	Lb.ft
0.25-20	5	4	8	6	11	8	12	9	14	10
0.25-28	7	5	10	7	12	9	14	10	15	11
0.31-18	11	8	18	13	22	16	24	18	27	20
0.31-24	12	9	19	14	24	18	27	20	30	22
0.44-14	33	24	47	35	59	43	68	50	75	55
0.44-20	37	27	54	40	68	50	79	58	87	64
0.50-13	50	37	75	55	94	69	106	78	119	88
0.50-20	56	41	88	65	106	78	122	90	134	99
0.56-12	75	55	108	80	136	100	156	115	171	126
0.56-18	81	60	122	90	149	110	176	130	191	141

0.62-11	102	75	149	110	190	140	217	160	237	175
0.62-18	115	85	169	125	210	155	244	180	270	199
0.75-10	176	130	271	200	332	245	380	280	420	310
0.75-16	203	150	298	220	366	270	420	310	472	348
0.88-9	169	125	434	320	536	395	610	450	679	501
0.88-14	190	140	488	360	590	435	678	500	751	554
1.00-8	258	190	651	480	800	590	915	675	1021	753
1.00-12	285	210	719	530	881	650	1003	740	1119	825
1.00-14	285	210	732	540	902	665	1030	760	1148	847
1.12-7	366	270	800	590	1132	835	1302	960	1447	1067
1.12-12-	407	300	902	665	1274	940	1451	1075	1624	1198
1.25-7	515	380	1132	835	1600	1180	1830	1350	2043	1507
1.25-12	569	420	1254	925	1776	1310	2034	1500	2267	1672
1.38-6	664	490	1478	1090	2095	1545	2400	1770	2676	1974
1.38-12	759	560	1688	1245	2393	1765	2739	2020	3056	2254
1.50-6	881	650	1966	1450	2786	2055	3186	2350	3556	2623
1.50-8	936	690	2088	1540	2962	2185	3390	2500	3781	2789
1.50-12	990	730	2217	1635	3145	2320	3593	2650	4010	2958
2.00-8	–	–	–	–	7342	5415	8406	6200	9367	6909
2.00-12	–	–	–	–	7687	5670	8786	6480	9811	7236
2.25-4.5	–	–	–	–	9701	7155	11090	8180	12377	9129
2.25-8	–	–	–	–	10629	7840	12148	8960	13566	10006
2.25-12	–	–	–	–	11050	8150	12636	9320	14102	10401
2.5-12	–	–	–	–	15280	11270	17463	12880	19500	14383

Note:

- The maximum tightening torque of standard bolts & nuts in this table is about 75% of the yield limit of bolt (nut) material.
- The thread specification is "0.25-20", in which 0.25 means the nominal diameter of the thread is 0.25in; 20 means 20 teeth per inch (i.e. pitch), converted into metric system, it is 25.4mm/20 = 1.27mm, i.e. pitch is 1.27mm.
- All torque values in the table are relative to lubricated threads. The meaning of "lubrication" here includes the use of thread lubricant, cadmium plating or hardened washer.
- The tightening torque in the table is the recommended value for general fasteners. In practical application, the tightening load is allowed to change by ± 10%.
- The torque specifications in the table correspond to the material specified in the GM standard. For the material beyond GM standard, you can query table 6-3, first convert it into GM standard material, and then check the torque value.

Non GM standard materials		Hardness	GM standard material
Ordinary low carbon steel	SAE1018	Rockwell "B" 85 ～ 100	GM 260-M
	SAE1020		
Ordinary medium carbon steel	SAE1035	Rockwell "C" 19 ～ 30	GM 280-M
	SAE1038		
	SAE1045		
Medium carbon alloy steel	SAE4140	Rockwell "C" 28 ～ 34	GM 290-M
		Rockwell "C" 32 ～ 38	GM 300-M
	SAE8642	Rockwell "C" 28 ～ 34	GM 290-M
		Rockwell "C" 32 ～ 38	GM3 00-M
	SAE5157	Rockwell "C" 28 ～ 34	GM 290-M
	SAE5147	Rockwell "C" 32 ～ 38	GM 300-M

Note:

- Improper screwdrivers and spanners shall not be used when tightening bolts and nuts. When tightening the nuts of a group of bolts, according to the shape of the connected parts and the distribution of bolts or nuts, tighten them evenly in a certain order (generally 2-3 times) to ensure that all screws or bolts have the same preload. When tightening a group bolts of rectangular arrangement, it should start from the middle and gradually expand and tighten symmetrically to both sides; when tightening the group bolts or nuts of circular or square arrangement, it must be done symmetrically, if there is a locating pin, it should start from the screw or bolt close to the locating pin.
- When a safety wire is used at the bolt head, it shall be threaded and wrapped firmly according to the thread rotation direction. When double nuts are used and adhesive is not used to prevent loosening, thin nuts should be installed first, and then the thick nuts should be tightened with about 80% torque, and then the thick nuts should be tightened with 100% torque.
- If the fastener needs to be replaced, its model should be the same as the original, or a replacement with the same performance as the original should be used.It is not allowed to use substitutes that are inferior to the original quality or inconsistent with the original design, so as to avoid unnecessary losses such as equipment damage or personal injury.
- When a self-locking fastener is removed and reinstalled on the original assembly, it can produce a measurable engagement or torque to provide relocking. Note: every time a self-locking nut is used, its locking function will degrade. In order to ensure the reliability of the self-locking fastener, it is stipulated that the self-locking fastener should only be used once.

Table 6-4 minimum universal disassembly torque of the lock nut

Thread size	Bolt		Lock nut			
	Grade					
	SAE grade 5, SAE grade 8 and ASTM a-574		SAE grade 5		SAE grade 8	
	Nm	Lb. ft	Nm	Lb.ft	Nm	Lb.ft
0.25-20	0.3	3	0.4	3.5	0.5	4.5
0.25-28	0.3	3	0.4	3.5	0.5	4.5
0.31-18	0.6	5	0.6	5.5	0.9	7.5
0.31-24	0.6	5	0.6	5.5	0.9	7.5
0.38-16	1.0	9	1.0	9.5	1.3	11.5
0.38-24	1.0	9	1.0	9.5	1.3	11.5
0.44-14	1.4	12	1.4	12	1.8	16
0.44-20	1.4	12	1.4	12	1.8	16
0.50-13	1.8	16	1.7	15	2.3	20
0.50-20	1.8	16	1.7	15	2.3	20
0.56-12	2.5	22	2.4	21	3.2	28
0.56-18	2.5	22	2.4	21	3.2	28
0.62-11	3.4	30	3.1	27	4.1	36
0.62-18	3.4	30	3.1	27	4.1	36
0.75-10	5.1	45	4.6	41	6.1	54
0.75-16	5.1	45	4.6	41	6.1	54
0.88-9	7.3	65	7.0	62	9.3	82
0.88-14	7.3	65	7.0	62	9.3	82
1.00-8	9.6	85	9.5	84	12.7	112
1.00-12	9.6	85	9.5	84	12.7	112
1.00-14	-	-	9.5	84	12.7	9.5

Section 7: Safety Critical Parts

7.1 shear bolt

- The shear bolt (Figure 7.1-1) is designed to protect the engine and transmission parts. The shear bolt can cut off the power source when the load exceeds the design load or when the blower is stuck, so as to protect parts of the engine, transfer case and other important assemblies.
- Please refer to Section 8.2 for shear bolt replacement.

Figure 7.1-1 shear bolt

Section 8: Maintenance Procedures

8.1 Daily maintenance

1. Lubrication
   1.1. Check the oil quantity of the 68 lubricating ports, and add oil/grease if necessary
2. Electrical system
   2.1. Check the working conditions of indicator lights, warning lights and auxiliary electrical equipment
3. Brake system
   3.1. Check brake pads and any leaking of brake lines
4. Engine
   4.1. Check the oil level and add oil if it is low
   4.2. Check for leaks

4.3. Check the fan for damage

4.4. Check oil temperature and oil pressure gauge reading

5. Fuel system

5.1. Check the fuel system for leaks

5.2. Check the fuel level

5.3. Check the water separator for water accumulation.

6. Cooling system

6.1. Check the coolant level and add coolant if it is low.

6.2. Check the hoses and components for leaks.

6.3. Note: Due to the low temperature environment, the silicone tube expands and contracts with heat, and the coolant may leak from the silicone tube joint. Tightening the clamp can solve the problem.

7. Air Filter

7.1. Check the air filter indicator

7.2. Check the air intake system for cracks and leaks

8. Hydraulic system

8.1. Check the oil level of the hydraulic oil tank and add oil if it is low

8.2. Check the hydraulic system and components for leakage and the hose for wear or damage

9. Axle

9.1. Visually inspect the tire pressure

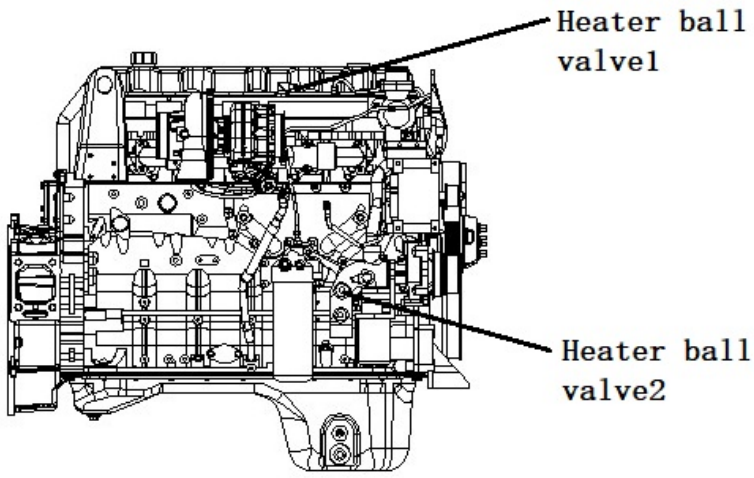
9.2. If the axle wheel nut and oil filling / drain plug are loose, retighten them in promptly

9.3. Check the lubricating oil for any leakage

9.4. Check the braking performance and reset. The clearance between the brake lining and drum must be within the range of 0.5-1.5mm. If the clearance exceeds the range or reset is abnormal, please adjust and maintain it in time

10. Heating system

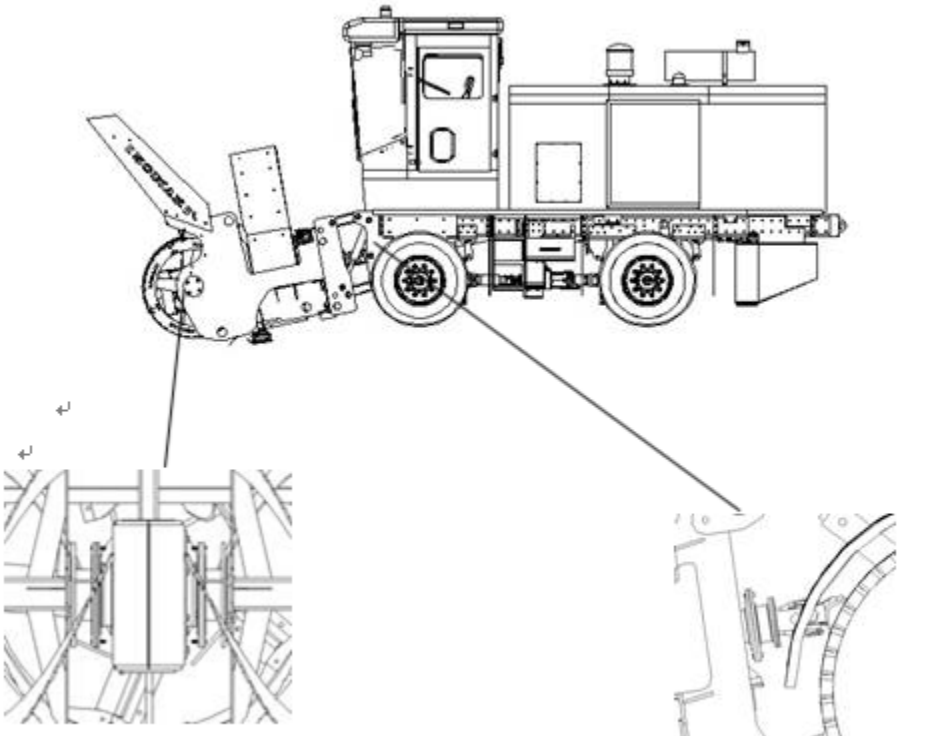
10.1. Check whether the ball valve of the heating system pipeline is closed (open when in use, as shown in figure 8.1-1), and whether the heater has leakage.



8.2 Shear bolt replacement

1. The shear bolt is an important safety part of the transmission system. It can cut off the power output of the engine and protect the engine when the auger is stuck or the load exceeds the design value due to the inclusion of stones in the snow. There are six shear bolts in the system, two on the left and right flange surfaces of the gearbox (as shown in figure 8.2-1 below), and two on the output shaft (as shown in figure 8.2-2 below). If the auger does not turn and the snow throwing impeller turns, it means that the shear bolt of the transfer case is broken. If the auger and the impeller do not rotate, only the output shaft rotates, it means that there is a problem with the output shear bolt, and the shear bolt can be replaced. The steps to install the shear bolt are as follows:

2. **WARNING: THE shear bolt HAS BEEN DESIGNED AND CHECKED. DO NOT REPLACE WITH ORDINARY BOLTS AS IT WILL LEAD TO EQUIPMENT FAILURE. FAILURE TO USE GENUINE KODIAK SHEAR BOLTS WILL RESULT IN IMMEDIATE VOID OF WARRANTY**
3. When replacing the new shear bolt, if the holes do not align, simply rotate the flange till the holes align and insert the new bolt.
4. Tighten the bolt, but do not over tighten.



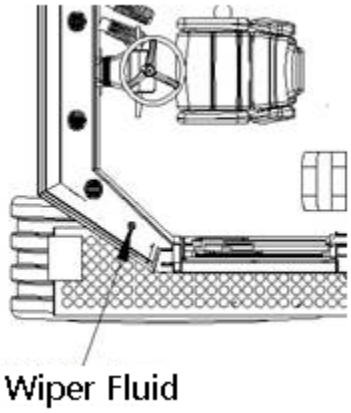
9.2-1 Location of gear box shear pin figure

9.2-2 Location of driveline shear pin figure

8.3 Wiper Maintenance

1. If the wiper is frozen, do not start the wiper, otherwise the wiper blade will be pulled down or the wiper motor will burn out.
2. First, start the defrosting function, let the warm air melt the thin ice or frost surrounding the wiper. After it has melted, start the wiper.

3. The washer fluid used by the wiper should be suitable for the local temperature environment. We recommend: b-2075, which can withstand low temperatures of -80 °C. The position of wiper filler is shown in figure 8.3-1 below.

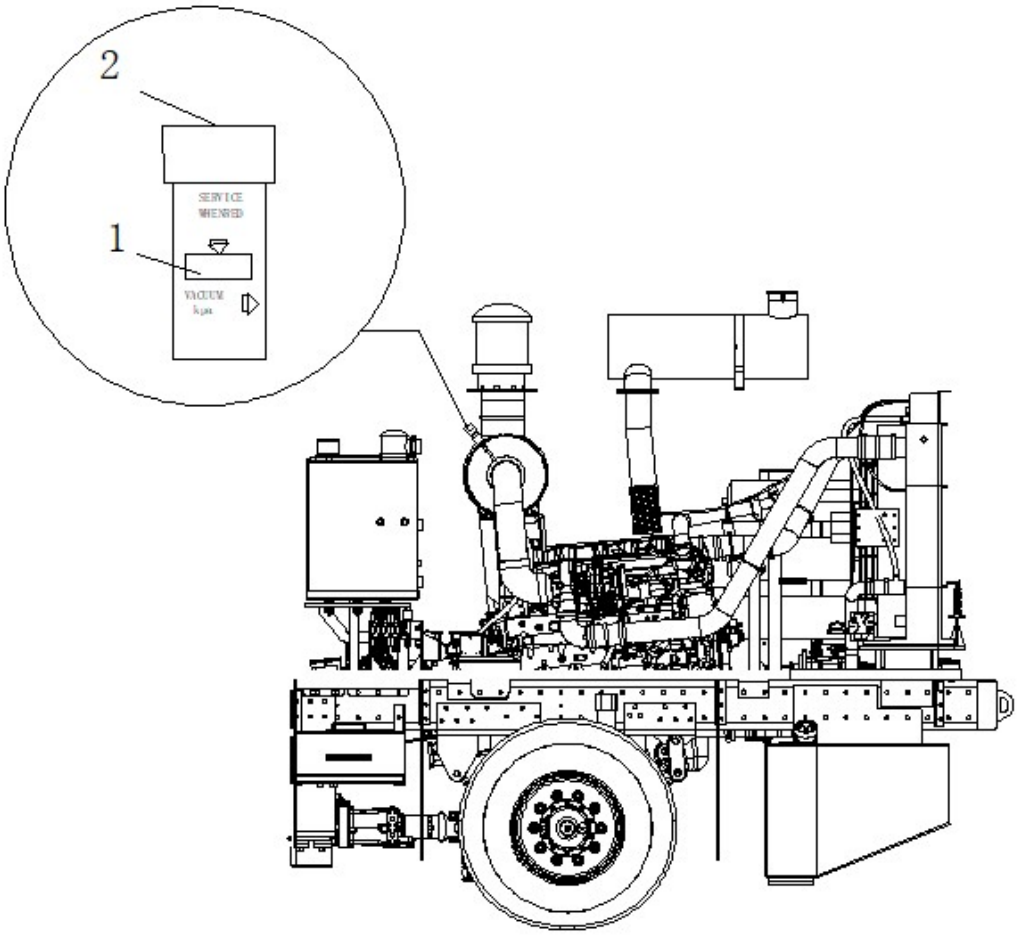


8.3.1 Location of wiper fluid filling port inside cab

8.4 One month maintenance

8.4.1 Clean the primary filter element

1. The dual element air filter consists of a primary element and a secondary element. If properly cleaned and inspected, the primary filter element can be cleaned up to six times. No matter how many times it has been cleaned, it must be replaced after one year. Figure 8.4.1-1 shows the location of the air filter and air filter maintenance indicator. Observe the maintenance indicator. If one of the following conditions occurs, the air filter element should be cleaned or replaced:
   1.1. The yellow diaphragm enters the red area.
   1.2. Any red is visible (Fig. 8.4.1-1).



1. Air filter indicator 2. Reset key

- Figure 8.4.1-1 location of air filter and maintenance indicator
- The steps to clean or replace the primary filter element are as follows:

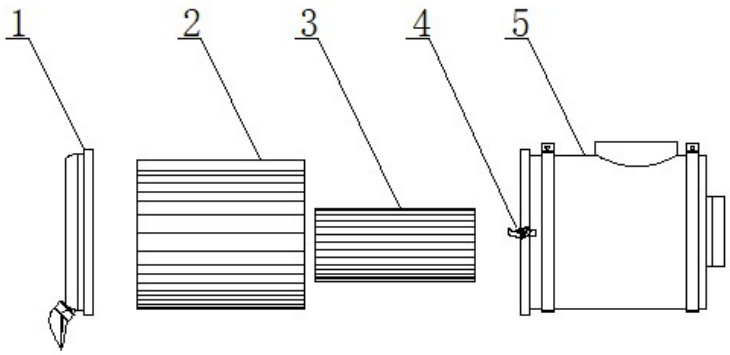


Figure 8.4.1-2 structural diagram of air filter
1-Filter head cover plate 2-Primary filter element 3-Secondary filter 4-Butterfly buckle 5-Filter body

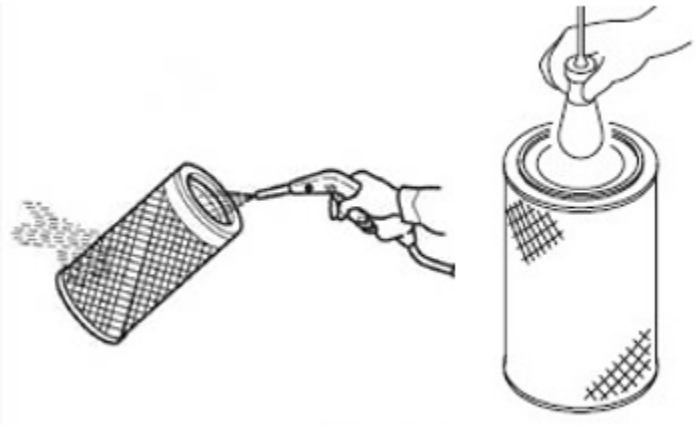
1. Stop the equipment and hang the "no operation for maintenance" tag;
2. Loosen the butterfly fastener 4 of the air filter (as shown in Fig. 8.4.1-2) and take out the filter head 1;

ATTENTION: WHEN CLEANING THE FILTER ELEMENT, ONLY THE PRIMARY FILTER ELEMENT SHOULD BE CLEANED, NOT THE SECONDARY. FAILURE TO DO SO MAY INTRODUCE CONTAMINATION INTO THE ENGINE.

3. Grasp the end face of primary filter element 2 with both hands and gently pull it out.
4. Hold the secondary filter element 3 so that it does not shake or fall out, and clean the inside of the air cleaner housing with a dry cloth.
5. Use dry cloth or compressed air to remove the dust adhering to the vacuum valve.
6. Confirm that there are no cracks in the lip of the vacuum valve. If any crack is found, replace it with a new one.
7. Use compressed air (0.69mpa {7kg / cm2}) to blow the dust away from the inside of the primary filter element along the fold. After cleaning the primary filter element three times, the secondary filter element must be replaced.

ATTENTION: DO NOT BLOW AIR FROM THE OUTSIDE TO THE INSIDE

8. After cleaning, use a light bulb to illuminate the inside of the primary filter element. If holes or thin areas are found, replace the primary filter element.



9. Install the primary filter element 2 into the air cleaner body 5, and then press the butterfly fastener 4.
10. Press the head of the indicator reset key (2 as shown in figure 8.4.1-1) to remove the blockage and complete the cleaning of the filter element.

8.4.2 Adding coolant

- While operating the equipment, it is necessary to observe the water temperature of the engine. If the water temperature rises suddenly, it is likely there is a coolant shortage in the cooling system. At this time, stop the engine immediately after idling for a period of time, and then wait for the coolant to cool before filling. The position of the filling port is shown in figure 8.4.2-1 below, and the filling steps are as follows:
    1. Stop the engine and hang the "no operation for maintenance" tag;
    2. Cover the pressure cap with a clean cloth and rotate it 90 degrees clockwise;
    3. Use a clean funnel when pouring the coolant. Add it to the middle and upper part of the liquid window;

4. In order to remove the air contained in the coolant, run the engine at low idle for 5 minutes, and then run it at high idle for another 5 minutes;
5. After stopping the engine for about 3 minutes, observe the coolant level, and more if it is still low;
6. Put on the pressure cap and add coolant.

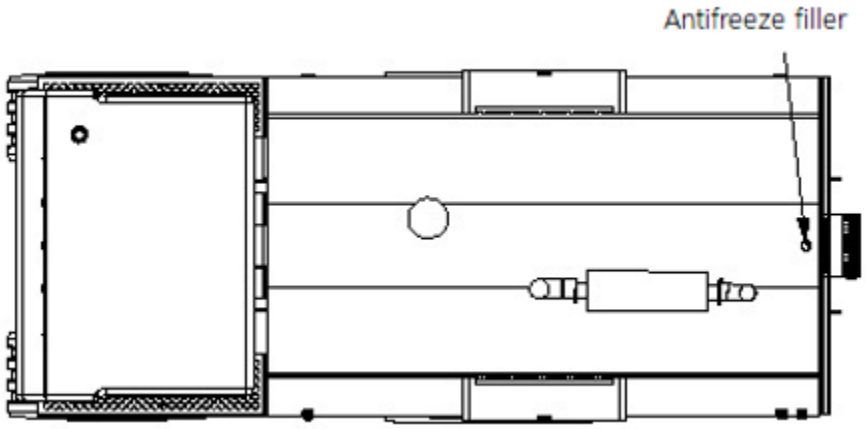


Figure 8.4.2-1 schematic diagram of adding coolant

WARNING:

1. AFTER THE ENGINE HAS RUN THERE IS PRESSURE IN THE COOLANT TANK. DO NOT REMOVE THE CAP UNTIL THE TEMPERATURE HAS DROPPED.
2. DO NOT MIX COOLANT TYPES OR BRANDS
3. PURE ANTIFREEZE IS FLAMMABLE
4. ANTIFREEZE IS TOXIC. KEEP AWAY FROM EYES AND SKIN

8.5 Six month maintenance

IN ADDITION TO THE FOLLOWING ITEMS FIRST PERFORM ALL STEPS FROM THE MONTHLY MAINTENANCE, SECTION 8.4

Cleaning the heat sinks

1. Check the radiator for these items: corrosion, dirt, grease, insects, leaves and other debris. Clean the radiator if necessary.

2. Compressed air is the preferred method to remove loose debris. Blow the compressed air in the opposite direction to the airflow of the heat sink. Keep the nozzle about 6 mm (0.25 in) away from the heat sink. Slowly move the air nozzle parallel to the radiator duct. This action will remove debris between the tubes.
3. Pressurized water can also be used for cleaning. The maximum water pressure for cleaning must be less than 275 kPa (40 psi). High pressure water is used to soften the sludge. Clean the radiator core from both sides.
4. Use degreaser and steam to remove oil and grease. Clean both ends of the heat sink. Rinse the radiator core with detergent and hot water. Rinse the radiator core thoroughly with clean water.
5. After cleaning, start the engine and raise to a high idle. This step helps to remove debris and dry the tank core. When the engine stops, put a bulb behind the radiator core to check whether the core is clean. Clean again if necessary. Check the radiator for damage. A bent heatsink can be fixed by a "comb knife". Check that these components are in good condition: weldments, mounting brackets, air lines, connections, clamps and seals, and repair if necessary.
6. Note adjust the frequency of cleaning work according to the influence of working environment.:

8.6 One year maintenance (or 250 Hours of Operation)

8.6.1 Replace the air filter element (see 8.4.1)

8.6.2 Oil change and oil filter change

- Tools: Hexagon wrench, one oil filter wrench (07404) larger than 50L container, 43l Mobil 5W-40 ci-4 new oil, one new oil filter lf9080.
- The operation is as follows:

1. Start the equipment for 10 minutes, then stop the machine and let the engine oil cool down to about 40 ℃ (high oil temperature will result in low oil viscosity, the debris in the engine can flow out with the engine oil), and hang the "no operation for maintenance" tag.

2. Remove oil drain plug 5 and 4, as shown in figure 8.6.2-1;
3. Open the pressure cap 2 of the oil filling port,
4. Wipe off the residual oil at the drain port and the filling port, tighten the plug of the drain port, and then change the engine oil to filter;
5. Place the oil filter wrench in the middle of the oil cup of oil filter 3, as shown in figure 8.6.2-2, and turn it counterclockwise to remove the old filter element; (be careful not to use too much force)
6. Clean the sealing surface of the mounting base to ensure that all old oil filter gaskets are removed;
7. Fill the new oil filter (lf9080) with oil;
8. Lubricate the new O-ring;

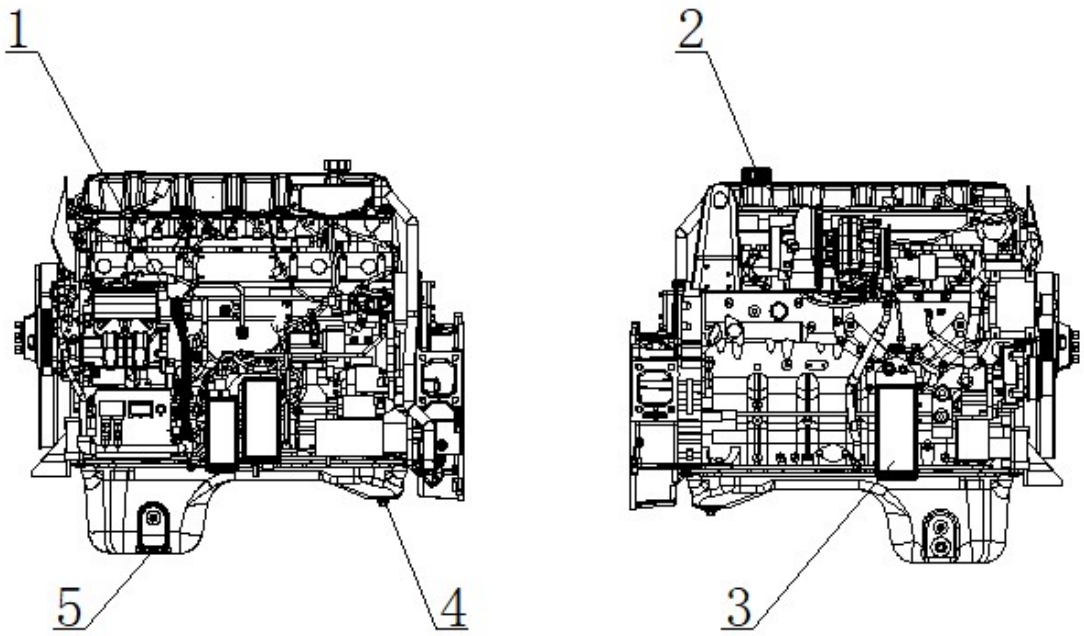


Figure 8.6.2-2 oil filter diagram
1-Oil dipstick 2-filling port 3-oil filter element 4,5-oil drain port

9. Install the new filter;
10. When installing a new filter element, do not over tighten it with the filter wrench to prevent damage;

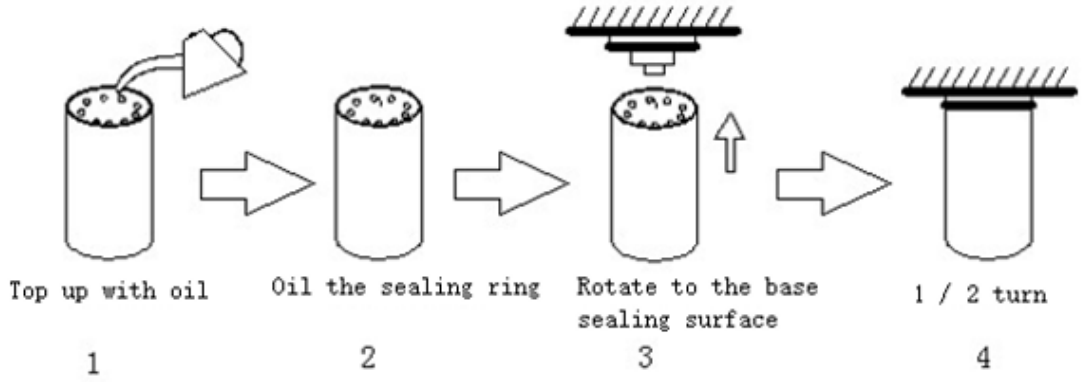


Figure 8.6.2-3 installation drawing of oil filter element

11. Fill the engine oil, and pay attention not to let impurities enter the engine when filling;
12. Start and run the engine at "low idle" for two minutes. This procedure is performed to ensure that there is oil in the lubrication system and that the oil filter is full of oil. Check the oil filter for oil leakage;
13. Stop the engine and wait for at least 10 minutes to make the oil flow back to the oil pan;
14. Take out the oil level gauge and check the oil level. Keep the oil level between "(add)" and "(full)" on the dipstick;
15. Clean the oil filler and install the oil filler pressure cap.

Figure 8.6.2-4 oil dipstick

16. Filter Checking: Unfold the pleats and check for metal debris in the oil filter. Excessive metal debris in the oil filter may indicate early wear or impending failure.

a. Use a magnet to separate ferrous and non-ferrous metals found in the oil filter element. Ferrous metals indicate wear of steel or cast iron parts of the engine.
b. Non-ferrous Metals indicate wear of aluminum, brass or bronze parts of the engine. Possible parts involved are: main bearing, connecting rod bearing, turbocharger bearing and cylinder head.
c. It is normal to find a small amount of metal debris in the oil filter due to normal wear and friction. If excessive debris is found, contact your Kodiak agent for further analysis.

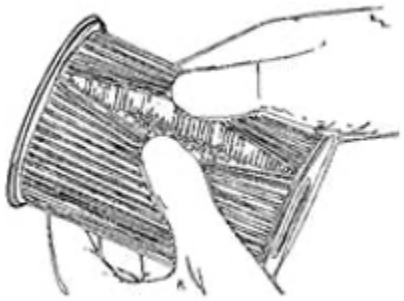
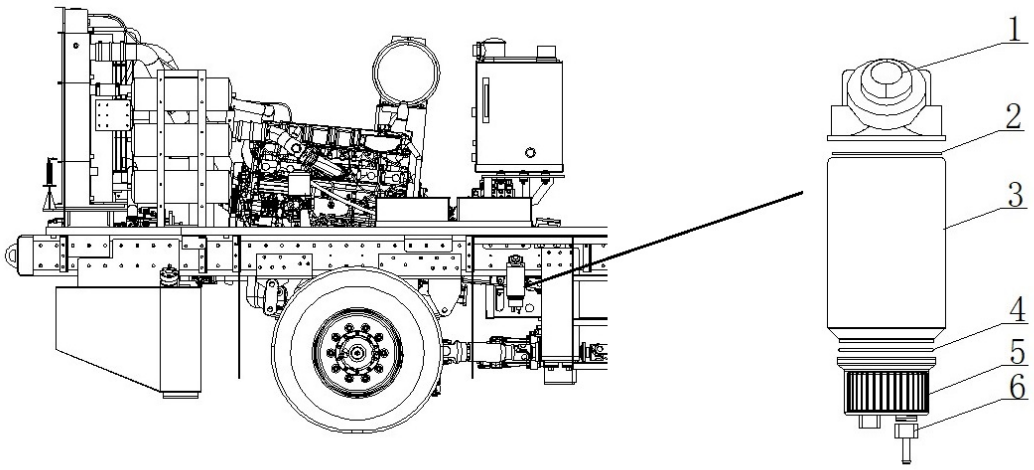


Figure 8.6.2-5 oil filter element

8.6.3 Replace the filter element of the oil-water separator

1. Stop the equipment and hang the "no operation for maintenance" tag
2. Prepare a container for waste oil, an oil filter wrench and a new filter element.
3. Rotate the drain valve 6 for 3 turns to drain water;
4. Screw down the water collecting cup (5) for use and do not discard it. Screw down the filter 3 from the base;
5. Replace the O-ring with a new one after installation;
6. Tighten the water collecting cup (5) for 1 / 4-1 / 2 turn;
7. Fill the new filter element (3) with fuel and install it;
8. Lubricate the sealing ring (4) between the new filter and the base;
9. Tighten the new filter to the base plane and then rotate it 3 / 4 turn (it is forbidden to tighten the filter with a wrench)

10. Before pumping oil, loosen the vent bolt, and then press the hand pump (1) to drain the air in the oil pipe;
11. Start the engine and observe whether the filter leaks. If there is no leakage, replace the filter. If there is, check whether the sealing ring is missing or broken.



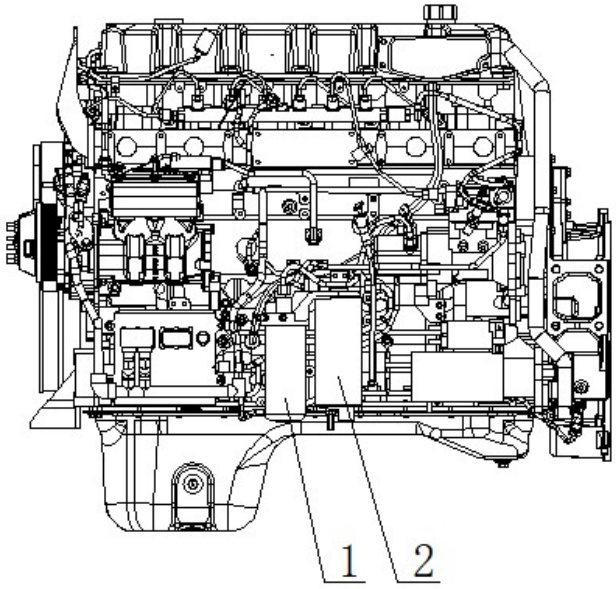
8.6.3-1Installation drawing of oil water separator
1. Exhaust button 2. Sealing ring 3. Filter cup 4. Sealing ring 5. Collecting cup 6. Drain valve

8.6.4 Replace the fuel filter

The fuel filter element and the oil-water separator filter element are always replaced together to ensuring that the whole oil system will not have poor filtration due to the mixing of the old and the new.

1. Stop the equipment and hang the "no operation for maintenance" tag
2. Prepare a container for waste oil, an oil filter wrench (07404), fs36260 and ff5687;
3. Remove the primary and secondary fuel filters with a wrench, as shown in figure 8.6.4-1;
4. Remove the old filter element and the old sealing ring at the same time;
5. Check whether the new filter plug is installed in place;
6. Fill the new filter with clean oil;

7. Lubricate the new sealing ring;
8. Pull out the plug;
9. Rotate the new filter to the base sealing surface;
10. Rotate 3 / 4 turn to tighten;
11. After replacing another filter with the above method, start the engine and observe whether the fuel filter leaks. If not, replace the fuel filter.



8.6.4-1Fuel filter diagram
1. Filter 1, 2. Filter 2

8.6.5 Changing oil in the transfer case

1. Stop the equipment, hang the "no operation for maintenance" tag, and chalk the tires;
2. Prepare a spanner, a funnel, a waste oil container and compressed air;
3. Remove plug (2) and use the container to receive the waste oil;
4. After the oil is discharged, open the oil filling port 3, and then blow compressed air from the oil filling port 3 to blow out the residual oil;
5. Plug the oil drain plug (2) and fill the lubricating oil with a funnel. Refer to Chapter 5 for filling capacity, or fill until the oil overflows from the filling port;

6. Start the equipment and observe whether the plug leaks oil. If it leaks oil, tighten it again;
7. It is normal to find a small amount of metal debris in the oil filter due to normal wear and friction. If excessive debris is found, contact your Kodiak agent for further analysis.

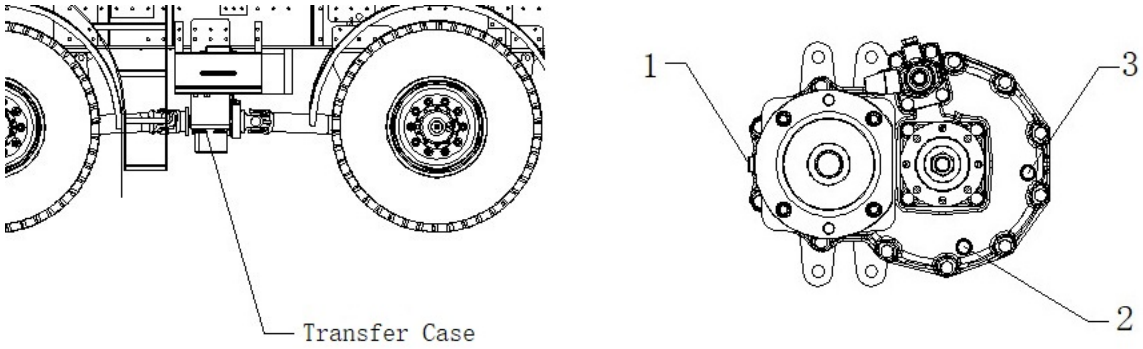
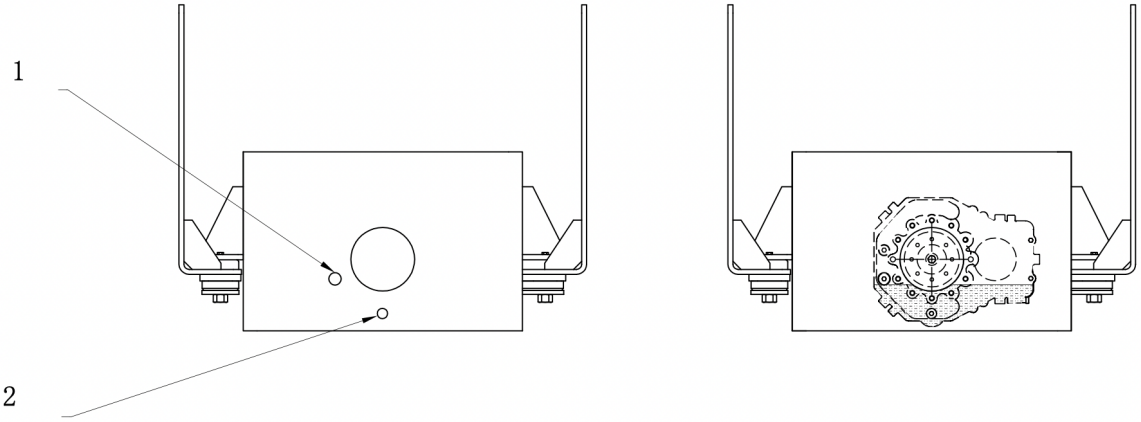


Figure 8.6.5-1 location of traveling transfer case
1. Vent 2. Oil drain 3. Oil filler



1：Oil inlet cap Oil level cap
2: Drain oil cap

8.6.6 Changing axle oil

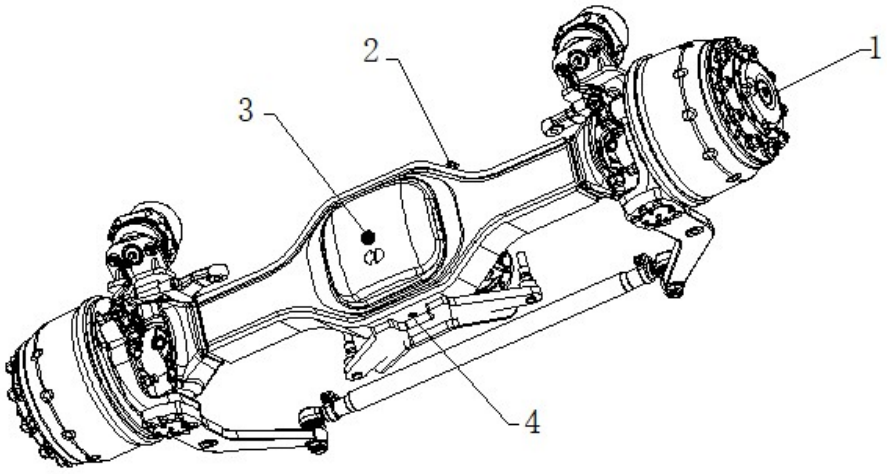


Fig. 8.6.6-1 changing lubricating oil for axle pack
1. Planetary hub oil drain and filling port 2. Axle pack air vent 3. Axle pack lubricating oil filling port 4. Oil drain port

Changing axle oil

1. Drive the car to a flat position, turn off the engine, hang up the "no operation for maintenance" tag, place it at the start key, and chalk the tires;
2. Remove oil plug (4), catch the waste oil with a container, and open the lubricating oil filling port (3) of the bridge package at the same time to make the waste liquid flow faster;
3. Blow clean compressed air into the oil chamber from port (3) to blow out the residual oil. Clean up the residual oil in port (3) and port (4), replace the oil plug in port (4), to a torque of 80 ± 10nm;
4. Fill lubricating oil with funnel. The model of lubricating oil is Mobil 80w-90 GL-5.Please do not add different types of lubricating oil, fill it to the following figure 8.6.6-2-a,

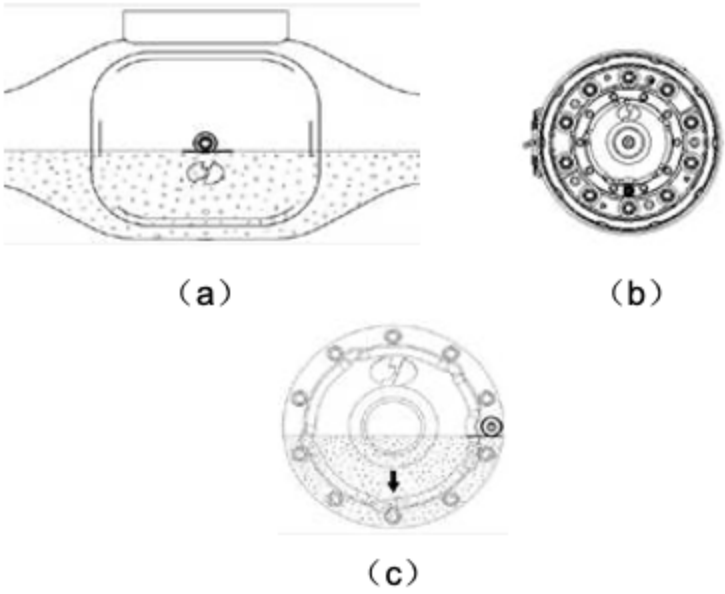


Figure 8.6.6-2 oil level diagram of axle

Changing planetary hub oil

5. Start the vehicle, place the hub oil outlet 1 at 6 clock (Fig. 8.6.6-2-b), turn off the engine, and then remove the plug to drain the oil; use a pipe or funnel to drain the waste oil into the container;
6. Start the vehicle, place the hub oil outlet 1 in the 3 clock direction (Fig. 8.6.6-2-c), turn off the engine, and then use a clean funnel to fill in new lubricating oil until it is as shown in Fig. 8.6.6-2-c.

8.6.7 Changing hydraulic oil and filter element of hydraulic system

A. Changing the hydraulic oil

1. Make sure blower head is resting on the ground to remove any system pressure.
2. Prepare a container larger than 300L for the drain hose to hold the waste oil
3. Remove the plug (2) as shown in Fig. 8.6.7-1, connect the hose, and put the other end into the waste oil container
4. Turn the handle (3) of the ball valve clockwise 90 ° to start the oil discharge. Observe whether the hydraulic oil is emulsified and whether there are a lot of

impurities in the oil. If the oil has deteriorated please clean the oil tank. Some impurities are normal wear of the hydraulic system, if you find a lot of impurities, please contact Kodiak after-sales service personnel.

5. Close handball valve 1 immediately after releasing
6. Tighten plug (2)
7. Add 250-300L hydraulic oil through the hydraulic tank

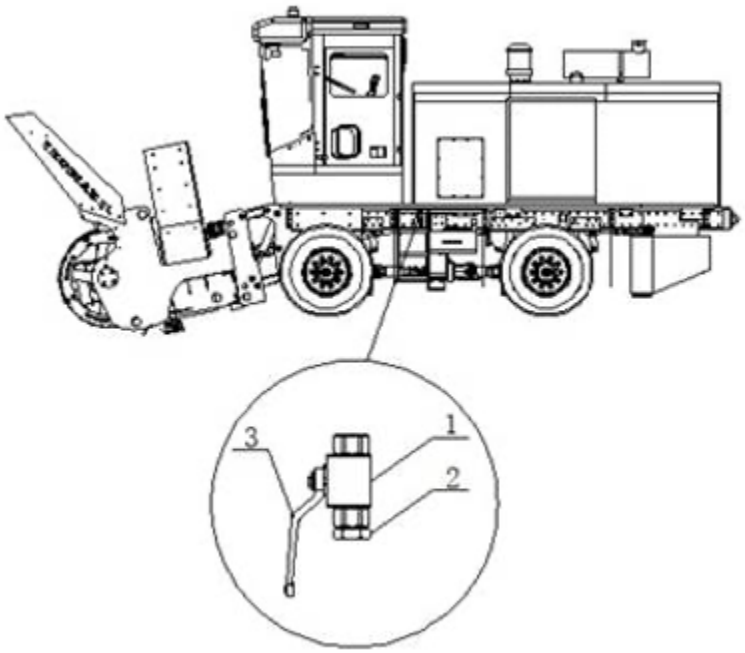


Figure 8.6.7-1 position of hydraulic oil drain ball valve

1. Ball valve
2. Ball valve outlet
3. Ball valve handle

B. Change hydraulic oil filter

1. Prepare a waste oil container and a wrench
2. Put the container under the filter element 1 to receive the oil, and use a wrench to open the nut 4, as shown in figure 8.6.7-2;
3. Remove the oil cup (3) and the filter element (2);
4. Replace with a new filter element model: pbe060f010n, please use the model recommended by Kodiak, otherwise the oil resistance is too large or the chemical reaction system may fail;
5. Tighten the bolt (4), clean the residual oil on the surface of the oil cup, and complete the filter element replacement.

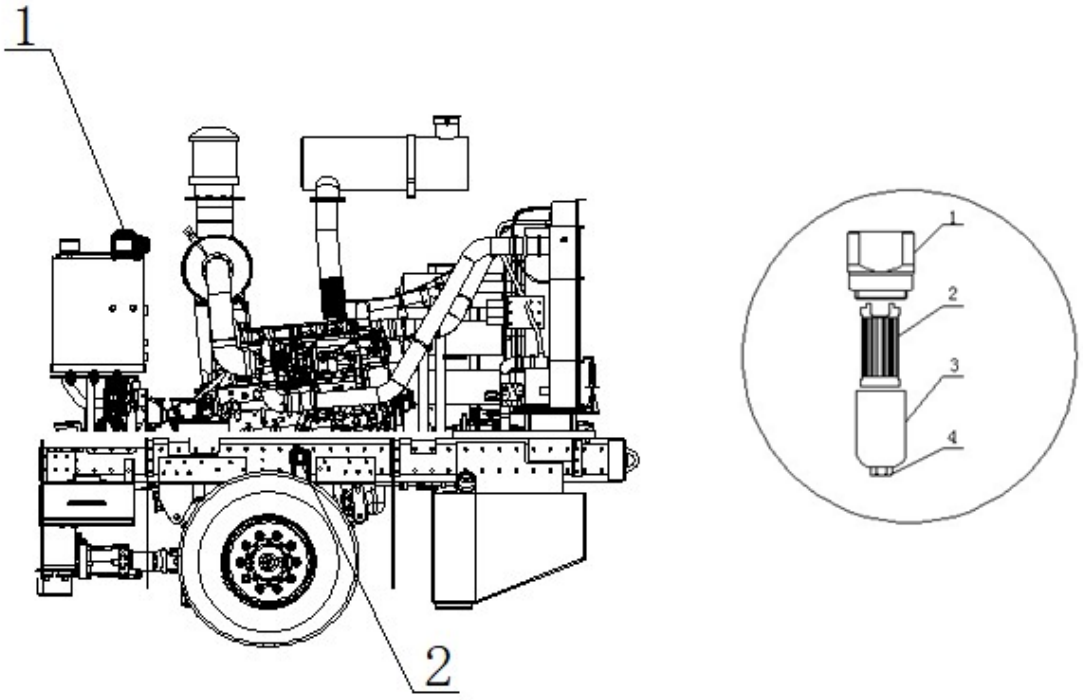


Figure 8.6.7-2 location of oil return filter element and hydraulic oil filter
Figure 8.6.7-3 location of hydraulic oil filter
1. Return oil filter element 2. Hydraulic oil filter

C. Replace oil return filter element

1. Open the filter cover (1) and take out the filter element;
2. Replace with a new filter element;
3. Tighten the filter cover (1);
4. Start the equipment and observe whether the cover plate leaks. If it leaks, tighten it again.

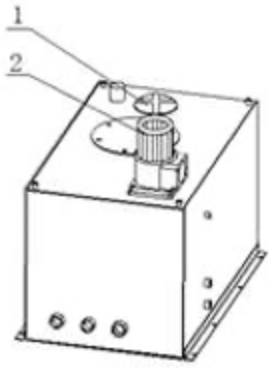


Figure 8.6.7-3 Schematic diagram of hydraulic oil filter element replacement

1. Cover plate of filter element 2. Oil return filter element

D. Replace the pump filter element

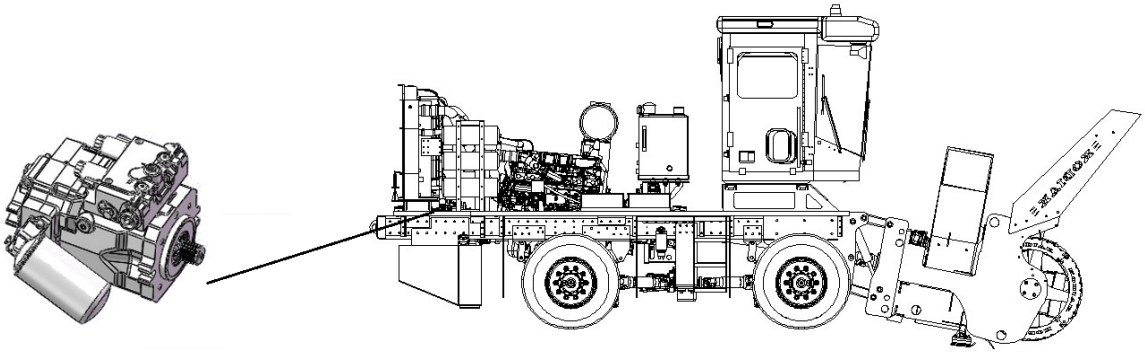


Figure 8.6.7-4 Pump filter element

1. Remove the filter element with the filter element wrench;
2. Apply an oil film on the washer;
3. Tighten the filter element until the filter mounting surface contacts the flange end of the filter;
4. Use the filter element wrench to further rotate the filter element by 30 ° and tighten it;
5. Start the engine, check for leaks and retighten if necessary.

6. After starting the engine, observe the oil return filter element and hydraulic oil filter for oil leakage at the same time.

8.6.8 Changing gearbox oil

1. Stop the equipment and hang the "no operation for maintenance" tag;
2. Prepare a 14 hexagon wrench, a funnel and a waste oil container larger than 13L;
3. Open the oil port bolt (2)as shown in figure 8.6.8-1, drain oil into the container and open the bolt oil port bolt to let the air in the cavity circulate and speed up the oil flow out;
4. After discharging, use compressed air to blow out debris from the filling port to the oil chamber. Pay attention to the residual oil flying out of the two ports to avoid the residual oil contacting the skin;
5. Observe the composition of the old oil, some filings in the oil is normal wear, if there is a large amount of debris with iron particulates, please contact Kodiak or maintenance agent;
6. Coat the oil drain bolt with 686 sealing glue, and then tighten the bolt;
7. Use funnel drainage to add transfer case gear oil (80w-90) from port 1. Different brands of oil cannot be mixed. Please use the oil recommended by Kodiak and add the oil to the upper part of the window;
8. Fill to the level of port 3. This should be removed and when oil reaches that level, stop filing and replace the plug
9. Apply 686 sealing glue to the bolt 1 & 3, and then tighten the bolt;
10. Start the equipment and let the auger run for 10 minutes to observe whether there is oil leakage in the transfer case. If there is oil leakage, tighten it.

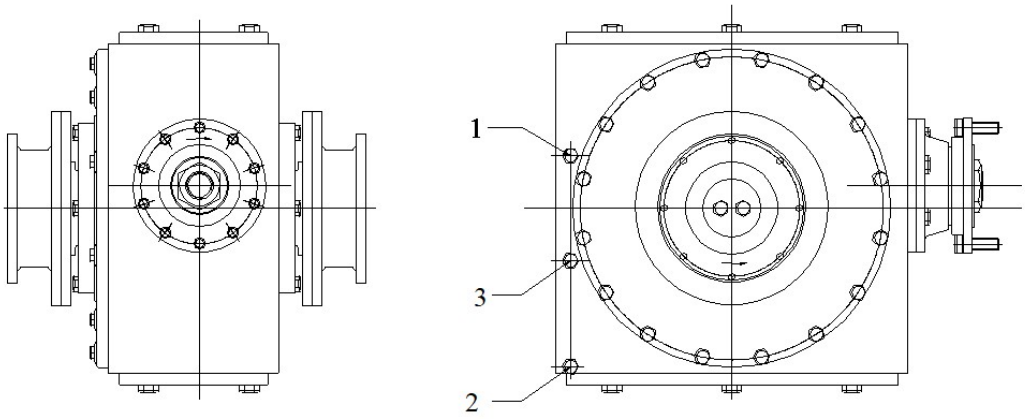


Figure 8.6.8-1 oil port location of gearbox

1. Oil filling port 2. Oil drain port 3. Oil fill level port

8.6.9 Replacing the air dryer filter element

1. Important: ensure that the internal pressure of the air dryer is completely removed before replacement;
2. Before installation, grease the sealing ring and threaded sleeve
3. Tighten the dryer by hand (maximum torque: 15N).

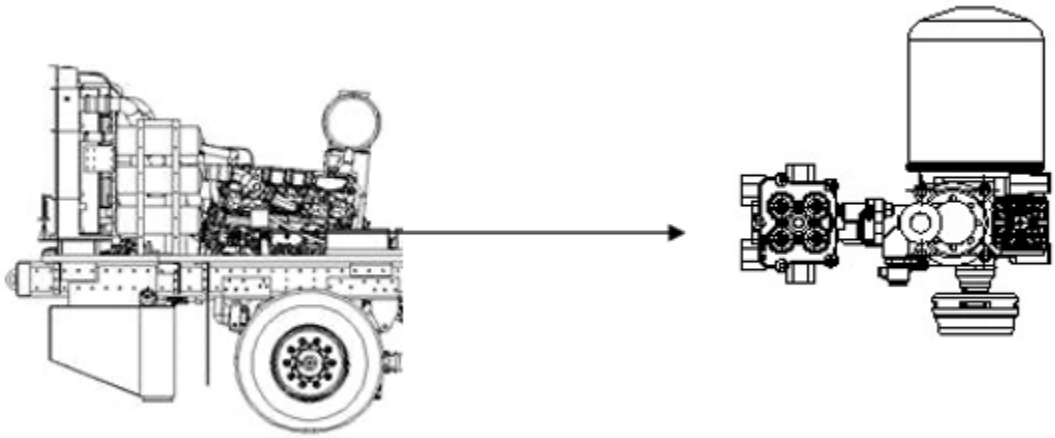


Figure 8.6.9-1 location of air dryer

8.6.10 Discharge of water and sediment from the fuel tank

Fuel quality is very important for engine performance and service life. Moisture in the fuel can cause excessive wear of the fuel system. Fuel oil will condense after heating and cooling. Water vapor condensation occurs when the fuel flows through the fuel system. Low fuel levels can cause water to condense and accumulate in the fuel tank. Regular draining of the fuel tank and obtaining fuel from reliable sources will help to remove moisture from the fuel.

1. Let the equipment stand for 72 hours to separate impurities and diesel oil;
2. Open the diesel drain plug to drain the fuel, as shown in figure 8.6.10-1,
3. Observe the discharged fuel. If all the discharges are clean, the oil drain can be blocked. If there are many impurities discharged, the fuel tank assembly should be cleaned. See Chapter 8.8.2 for the cleaning steps of the fuel tank.

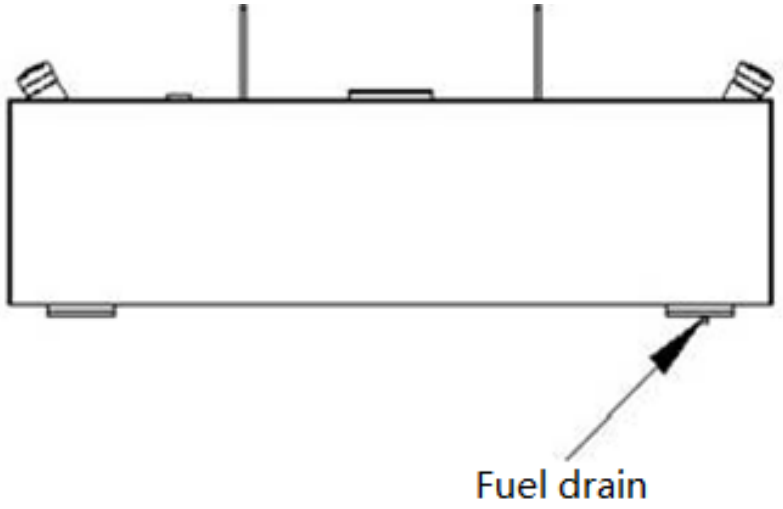


Figure 8.6.10-1 Fuel tank drain

8.7. Two year maintenance

IN ADDITION TO THE FOLLOWING ITEMS FIRST PERFORM ALL STEPS FROM THE ONE YEAR MAINTENANCE SECTION 8.6

8.7.1 Changing the coolant

1. Stop the engine and hang the "no operation for maintenance" tag;
2. Connect the transition hose to the drain valve for drainage;
3. Rotate the handle of the ball valve to 90 ° and put the other end of the hose into the container. Open the pressure cap (1) of the water tank while discharging the coolant;
4. After discharging the coolant, close the ball valve;
5. After discharging the coolant, add new coolant to the window center of the water tank;
6. To remove air from the coolant, run the engine at low idle for 5 minutes, then at high idle for another 5 minutes. Watch the temperature the whole time
7. After stopping the engine for about 3 minutes, observe the coolant level, and fill if it is low;
8. Open the vent plug of the heater (as shown in Fig. 8.7.1-2), and close if part of the coolant overflows;
9. Start the heater, and touch to feel whether there is liquid flow in the inlet and outlet pipes of the heater, and whether the liquid temperature in the water pipe rises slowly. If there is no liquid flow in the heater, please contact Kodiak or the maintenance agent.
10. Clean the residual liquid on the water tank cover to complete the filling of coolant.

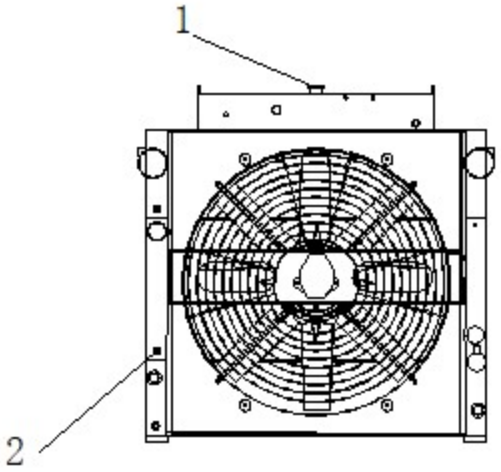


Figure 8.7.1-1 Location of water tank ball valve
1. Pressure cap 2. Drain valve

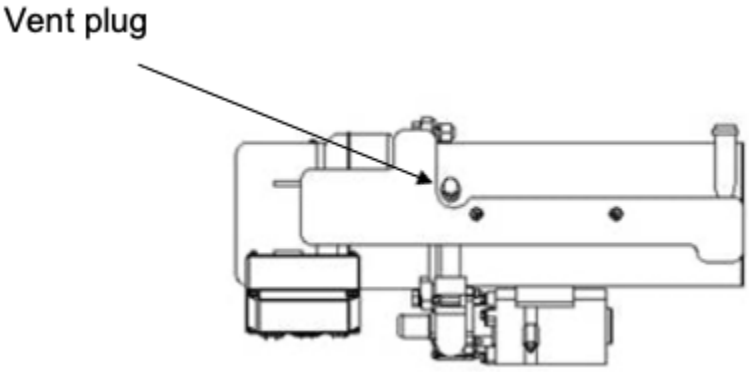
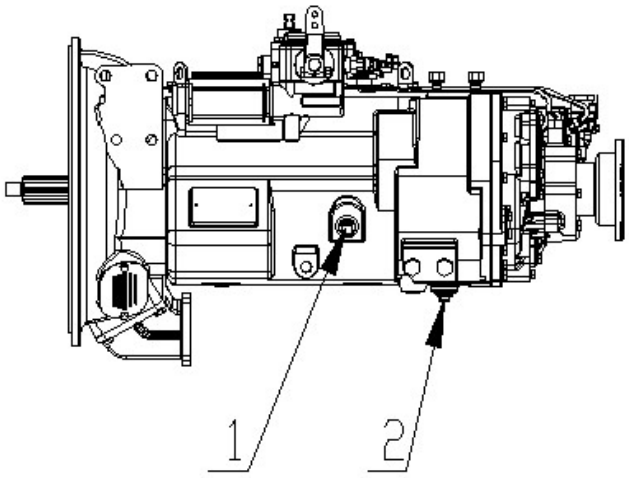


Figure 8.7.1-2 Location of heater vent plug

8.7.2 Changing transmission oil

1. Remove drain plug (2) and use a container to receive the waste oil;
2. Remove oil filler plug (1) to facilitate the removal of oil;
3. After the oil is discharged, tighten the plug (2);
4. Fill the transmission oil with funnel drainage. The oil can be stopped when the oil overflows. Different kinds of oil cannot be mixed. Tighten plug (1).
5. Start the equipment and drive for 10 minutes to observe whether there is oil leakage at the oil port. If there is oil leakage, tighten it again.



8.7.2-1 Location of oil filling and drain port of transmission
1. Oil filling port. 2. Oil drain plug

Section 9 Miscellaneous

9.1 Maintenance before warehousing

As the snow blower is seasonal equipment and has a long waiting time, the equipment must be maintained before it is put into storage. In addition to maintenance according to section 8.1, Kodiak also requires the following points:

1. Clean the whole machine, and touch up paint to avoid rust
2. Lubricate the equipment according to Section 2.1;
3. Start up for 10 minutes after lubrication to confirm that there is no short circuit in the circuit during cleaning. At the same time, run all operations once, so that the grease just added can be lubricated evenly;
4. The equipment should be stored in a dry environment to avoid rust;
5. Turn off the main power supply;
6. Start once a month to lubricate the equipment for 10 minutes. In case of power loss, please charge the equipment in time. The main power supply must be turned to "off" when charging.

9.2 Tire Change

Tools: torque wrench, Jack, No.22 socket, etc

1. Park the car on a smooth ground, wedge the tires, and then turn off the engine;
2. Install the jack, use the sleeve to loosen the bolts on the wheel hub, and take off the tire;
3. Install the spare tire. The tire model is 14.00 R24. When tightening the screws, tighten them according to the tightening sequence shown in the figure below (550-600nm) (diagonal preloading). The tire model matches the wheel hub, and the tire with a mismatched model cannot be installed.
4. The tire pressure is 900 kPa.

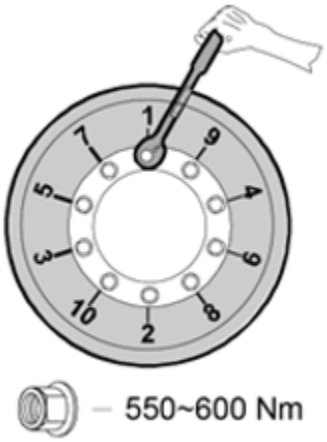


Figure 9.2-1 Hub mounting torque range and bolt tightening pattern

9.3 Belt Replacement

1. Put the square head of the L-type wrench (4316750) into the square hole of the tension pulley, and then press down the wrench. After the tension pulley moves downward, remove the old belt;
2. Install a new belt, belt model: 5580037;
3. Observe whether the V-groove of the belt falls into the pulley groove. If there is no problem with the installation, start the engine. Observe whether the pulley rotation is abnormal.

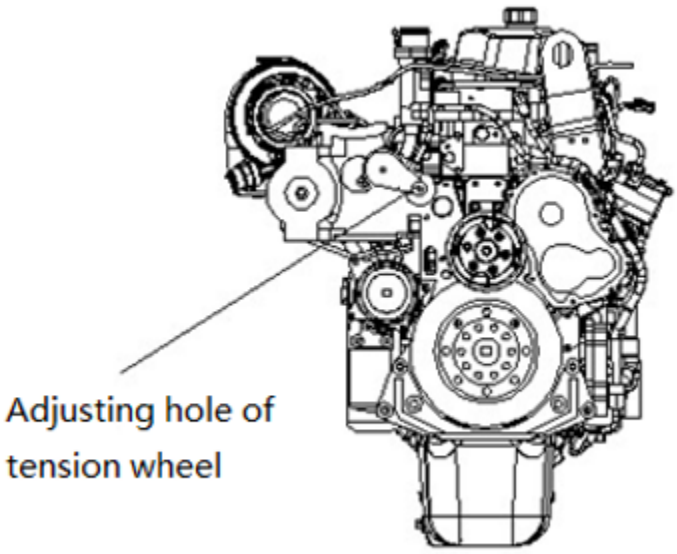
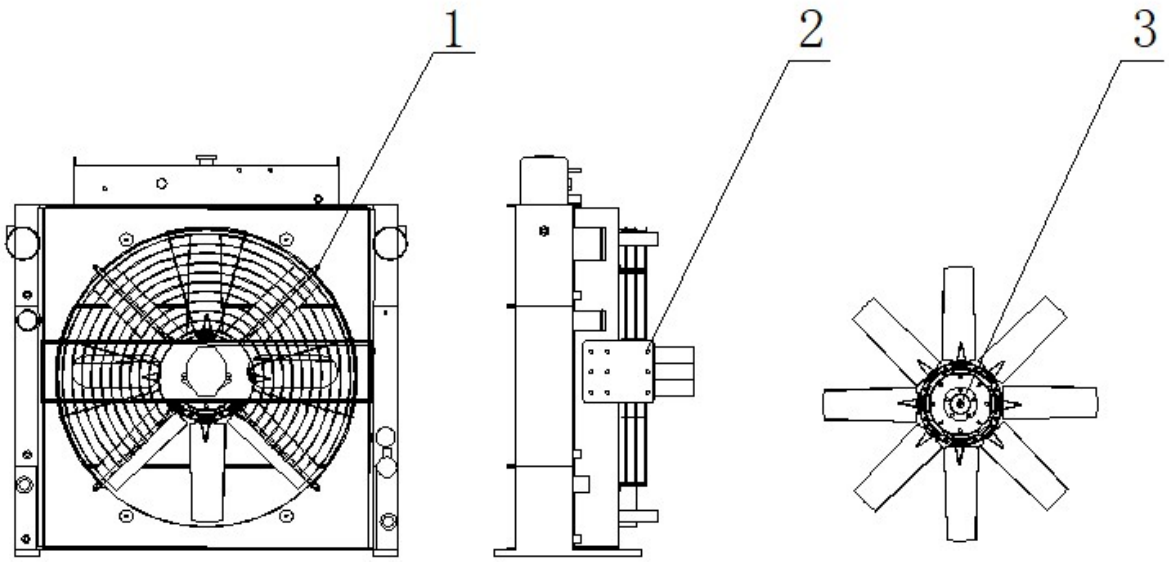


Figure 9.3-1 tension pulley belt

9.4 Fan Replacement

1. Loosen the fan cover bolt (1);
2. Loosen the motor mounting bracket bolt (2) to take out the motor and fan cover together. If necessary, loosen the motor oil pipe, so that the motor assembly can be moved out more easily;
3. Loosen the locking bolt of the fan and move out the old fan;
4. Replace the fan with a new one, and then tighten the bolt;
5. Install all the components back to the original position, rotate the fan, and then observe whether the blade of the fan reaches the edge of the fan. If not, start the engine to complete the replacement of the fan. Use only OEM parts



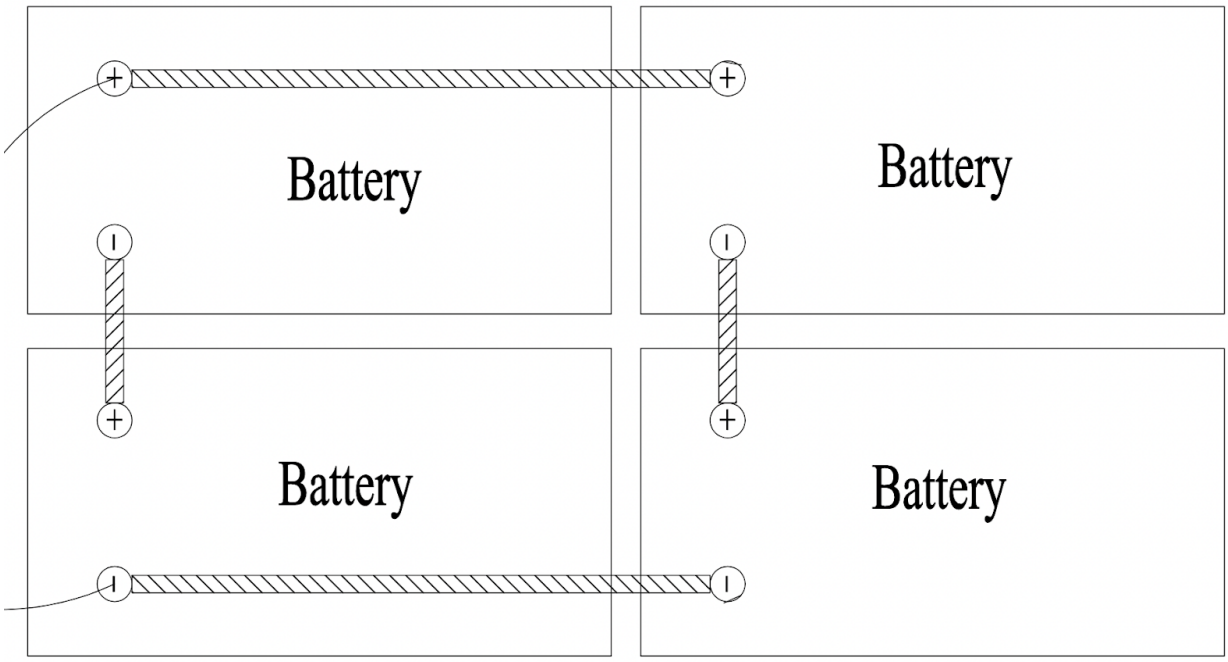
9.4-1 Schematic diagram of fan replacement

1. Fan housing bolt. 2. Motor mounting bracket bolt 3. Fan

9.5 Battery Replacement

1. First turn off the main power, remove the negative lead (1), and then remove the positive lead (2);
2. Install four batteries, two 12V batteries in series to form a group of 24 V, and then two groups of parallel power supply 24 V, please use the battery model recommended by Kodiak,
3. First install the positive lead (2), and then the negative lead (1). Follow the principle of first install and then remove, and then install and remove first, so as to avoid a short circuit. Do not mix old and new batteries.

9.5-1Battery connection configuration



Part III

Section 1. Safety instructions

Many accidents in the operation, maintenance and repair of machines are caused by non-compliance with basic safety rules or preventive measures. If you recognize all kinds of potential dangerous situations, accidents can often be avoided. All potential dangers must be reported to the staff. It is necessary to train the staff to master the necessary skills and use the tools correctly. Improper operation, lubrication, maintenance or repair of the machine is dangerous and can at minimum cause failure to the equipment and at worst even casualties. You must read and understand the information about the operation, lubrication, maintenance and repair of the machine before you attempt to carry out these works.

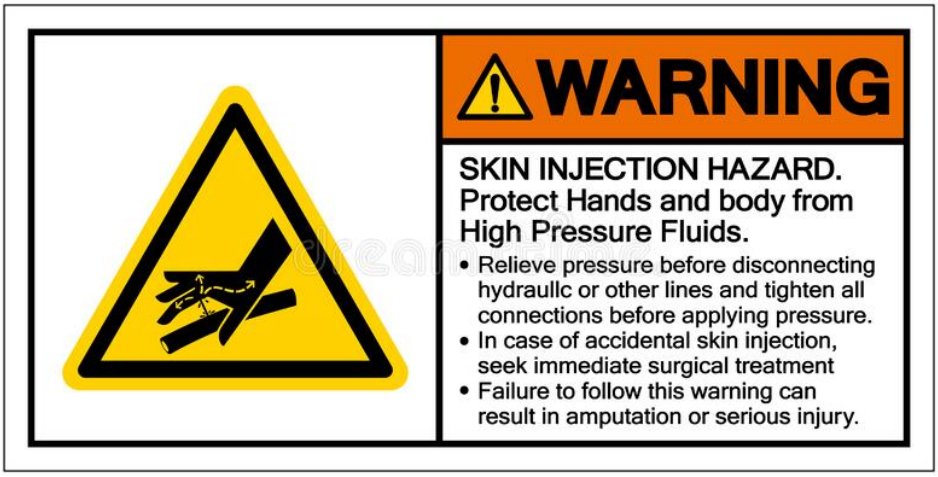
1.1 Maintenance personnel

Only trained and instructed personnel can operate and maintain the machine.

1.2. Risk in Maintenance

- Pressure Release

Make sure all pressure of the hydraulic system is released BEFORE you remove any valve, cylinder, hydraulic connector or valve cover.



- Liquid Penetration

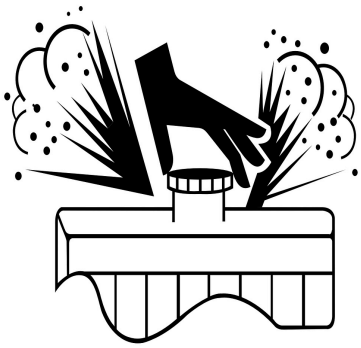
  A protective shield must be used while checking for leaks. Liquid ejected under pressure, even from the pinhole, may penetrate human organs, causing serious injury, or even death. If the fluid penetrates the skin, seek medical attention immediately.

- Prevention of Injury

  Do not make any adjustments when the machine is running.

- Prevention of burns

  At operating temperature, the engine coolant is hot and pressurized. The radiator and all piping to the heater or engine contain hot water and steam. If exposed this can cause serious burns. Hot engine oil and machine parts can also cause personal injury. Avoid contact with skin. Engine turbocharger, exhaust pipe, muffler, heater and



other parts are all at high temperature. Do not touch them while the engine is running or within 2 hours of operation.

- Prevention of fire and explosion

  All fuel, oil, lubricants and some coolant mixtures are flammable. Leakage or spillage on hot surfaces or electrical components can cause a fire. No smoking is allowed in or around the equipment

- Prevention of cuts and pinches

  Equipment belts, fans and rotating shafts and all rotating parts may catch hands, feet or clothes when they rotate. Please pay attention to your hands, feet and clothing in any dangerous area during maintenance.

1.3.Precautions Before Maintenance

- Place a "do not operate" or similar warning label on the key switch or handle before maintenance and repair of the machine.
- Wear a safety helmet, protective glasses and other protective measures according to the requirements of working conditions.
- Don’t wear bulky clothes or jewelry as they may catch on parts of the machine.
- Be familiar with hand signals and who sends them. Accept signals from only one person.
- Do not put maintenance solutions in glass containers.
- Report all items that must be repaired.

1.4 Precautions in Maintenance work.

- Before starting the engine or starting the machine, make sure that no one is working on or near the machine.
- Do not start the engine or move any handle if there is a "do not operate" or similar label on the key switch or handle.

- When getting in and out or on and off the machine: Keep hands and feet in three-point contact while climbing (one hand two feet or two hands one foot).
- It is forbidden to jump up and down from the vehicle, and it is not allowed to climb when the machine is running.
- Do not use any operating mechanism as a handrail.
- It is necessary to keep the cab, vehicle suspension ladder and handrail clean, especially when it snows.
- It is necessary to keep the suspension ladder and handrail clean.

Section 2. Troubleshooting, Assembly and Disassembly

2.1 Troubleshooting.

Blower head

Problem	Cause	Remedy
Snow not throwing	• Snow buildup in volute caused by wet or heavy snow, moving too fast, • Very light snow, moving too slow	• Manually clean with a shovel. • Adjust speed to the condition of show
Ribbons not rotating	Master or secondary shear flange shear bolts are broken	Replace shear bolts
Excessive shaking	Buildup of snow or ice on fan blades.	Manually clear away ice or snow
Ribbons move slowly when transmission is in neutral	Driveline brake worn out or failed	Replace brake pads or replace braking unit

Engine won’t start

Problem	Cause	Remedy
Engine won’t turn over	● Low battery voltage ● Hydrostatic stroker is not in neutral ● Gear shifter not in neutral ● Start relay, blown fuse ● Damaged starter	● Charge battery ● Put the hydrostatic stroker ● Place gear shifter in neutral ● Replace starter relay and fuse ● Repair or replace starter
Engine turns but will not start	● Low fuel ● Air in the fuel lines ● Emergency stop switch pressed	● Add fuel ● Bleed the air from the line ● Release emergency stop switch

Vehicle won't move

Problem	Cause	Remedy
Vehicle won’t move	Electrical issue	● On the monitor, check the signal output for hydrostatic drive ● Check the output current of the controller ● Check the circuit of the drive pump, solenoid valve and drive motor solenoid valve ● Check the resistance of the drive motor solenoid and valve coil ● On the monitor, check the parking brake signal, ○ foot brake signal, ○ emergency stop switch
Vehicle won’t move	Calibration issue	Re calibrate the min & max in the “settings” tab of the system
Vehicle won’t move	Hydraulic system issue	● Check driving pump charge pressure ● Check drive pump pressure ● Check for hydraulic fluid leakage

Vehicle won't move	Mechanical reason	• Check pump driveline • Check air pressure to make sure parking brake can release

Transmission

Problem	Cause	Remedy
Clutch won't engage or disengage, no shifting	• Damaged clutch solenoid valve • Clutch plates worn out	• Replace clutch solenoid valve • Check for damaged wiring • Replace clutch pads
Clutch won't engage or disengage, no shifting	Insufficient clutch air pressure, resulting in the shift booster not working	Check the air pressure on the display (>0.6Mpa)
Can't select gear, or will not disengage	• Damaged cable • Insufficient cable travel	• Replace the cable • Adjust the shift cable

Blower head hydraulic

Problem	Cause	Remedy
BLowerhead lift, volute rotations, floating function failure	Controller output current is abnormal	You can check whether the controller has output by checking the IO interface of the display screen. Gray means no output, green means normal output, and red means line failure or solenoid valve coil failure.
same	Damaged working pump for pressure or leakage	Fix pump or leakage
same	Damaged solenoid valve	• Replace solenoid valve

Front Axle

Problem	Cause	Remedy
Front wheels do not turn	Steering pressure too low	● Check system pressure, ● check for leakage
Steering system making noise	Mechanical failure	● Check grease point for abnormal wear ● Check all linkages in steering system

Rear Axle

Problem	Cause	Remedy
Wheels do not turn	Controller output current is abnormal	You can check whether the controller has output by checking the IO interface of the display screen. Gray means no output, green means normal output, and red means line failure or solenoid valve coil failure.
same	Damaged joystick	Replace the joystick. If you need to realign the rear wheels, this can be done manually with the valve in the engine compartment
	Steering system pressure too low	● Check system pressure, ● check for leakage
Rear Steer won't engage on monitor	Transfer case in high (Rabbit)	Set transfer case to low (tortoise)

Transfer case

Problem	Cause	Remedy
Transfer case cannot switch between high and low	Controller output current is abnormal	You can check whether the controller has output by checking the IO interface of the display screen. Gray means no output, green means normal output, and red means line failure or solenoid valve coil failure.
same	Physical switch damaged or wiring damaged	Check wiring on switch

same	Mechanical failure	Service transfer case

Air system

Problem	Cause	Remedy
Low system air pressure	● Air leak ● Sensor failure	● Replace or fix the line with the leak ● Replace the air pressure sensor
Brake system has water	● Air dryer failure ● Air tank with water	● Change air dryer filter ● Replace air dryer ● Drain air tank
Brakes are sluggish	● System leak ● Pressure is too low ● Brake clearance too big	● Fix leaks ● Check system pressure ● Adjust brake clearance
Axle differential lock failure	● System air pressure too low ● Differential lock electromagnet damaged ● Differential lock switch wires disconnected or damaged	● Check air system ● Replace the differential lock solenoid ● Replace switch or repair wires

System communication Failure

Problem	Cause	Remedy
Communication failure	Engine communication failure	● Check the ECM ● Check for loose or damaged wires ● Check the resistance of the CAN-BUS line
Same	Joystick communication failure	● Check the joystick power supply ● Check wiring ● Check the resistance of the CAN-BUS line
Same	Front or rear steer comm failure	● Check the front and rear axle steering angle sensor ● Check for loose or damaged wires ● Check the resistance of the CAN-BUS line

Battery charging failure

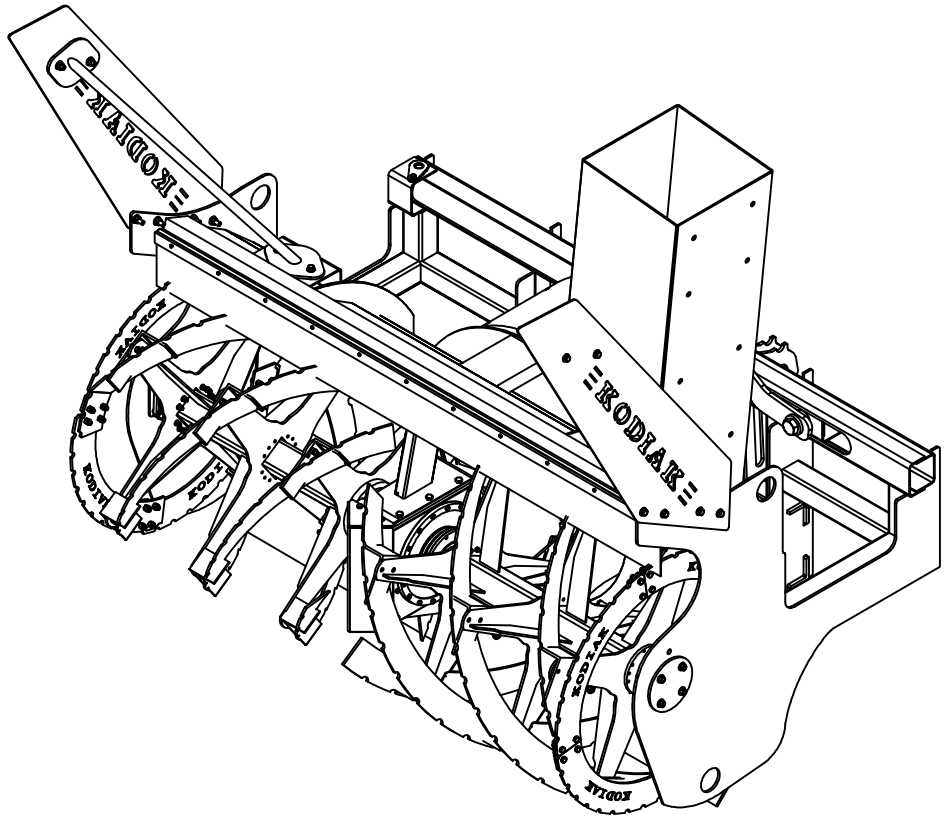
Problem	Cause	Remedy
Alternator not charging	● Damaged alternator ● Alternator fuse blown ● Alternator loose or damaged wires	● Replace or repair alternator ● Replace fuse ● Fix wires
Battery not holding charge	● Damaged battery ● Battery disconnected ● Master disconnect failure	● Visually inspect the battery for damage. ● Test battery ● Check wiring ● Replace master disconnect

Water system Failure

Problem	Cause	Remedy
Water temperature alarm	● Insufficient cooling ● Damaged fan ● Coolant level sensor failure	● Check coolant level, add if needed ● Replace fan ● Replace sensor
Pipeline leaks	● Loose clamps ● Ruptured silicone tube	● Tighten clamps ● Replace silicone tubes
Water temperature under load operation is lower than 60 °C	Engine thermostat is broken	Contact Kodiak or Cummins for replacement thermostat
No heat in cab	● Ball valve not open ● Check coolant lines for damage	● Open ball valve ● Replace damaged lines ● Check vent lines in console for blockage or kinking
Heater exhausts is black	● Heater carbon deposits ● Exhaust pipe blocked	● Repair or replace heater ● Check if the intake pipe is blocked

Part IV

Num	Part Num.	Description	Quantity
1	550S–1001100	Ree–44–108–WLD–Left	1
2	550S–1001848	Moline Bearing	2
3	550S–1001497	Bearing Shim	2
4	550S–1001742	PF–Side–Shim	2
5	550S–1001078	Cutter	1
6	550S–1002060	Shoes Assembly	2
7	550S–1002000	Plow Frame Weldment	1
8	550S–1004820	Fan Back with bade mount	1
9	550S–1002600	Connecting Arm Assembly	1
10	550S–1008622	Left Side Cutter	1
11	550S–1006130	Slid Tube Slug Weldment	1
12	K01120 Or K90013	Volute Cylinder	1
13	550S–1008212	Side Cutter Support	1
14	550S–1005100	Volut Weldment	1
15	550S–1008211	Side Cutter Plate	1
16	550S–1008213	Side Cutter Support	1
17	550S–1008621	Right Side Cutter	1
18	550S–1003666	Press Plate	6
19	550S–1003665	Flap	3
20	550S–1003700	Ree–44–108–WLD–Right	1
21	550S–1001860	Gear Box	1
22	550S–1003416–1	Volute Ring	3
23	550S–1006310	Fan Blade	4
24	550S–K00608	Flange	2
25	450S–K10601–A–1	Input–GB–ASM	1



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are In mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH±0.5° BEND
Machined/Drilled Holes:

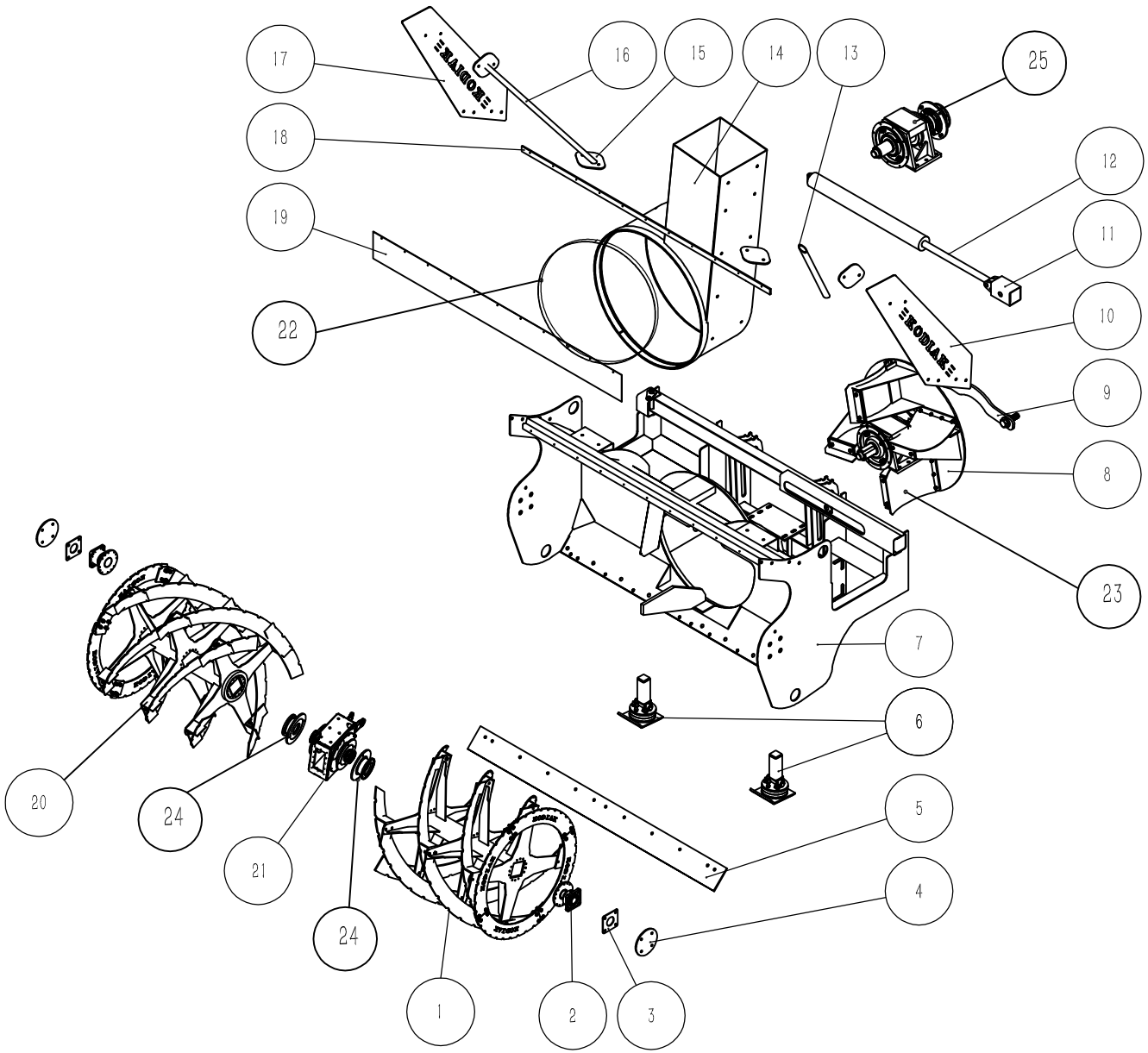
All Others
x.x ±0.10
x.xx ±0.06
0.03

Part Description
Blower Aseembly

Part Number
550S–1001000–1

Revision
–0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Blower Aseembly

Part Number
550S-1001000-2

Revision
-0

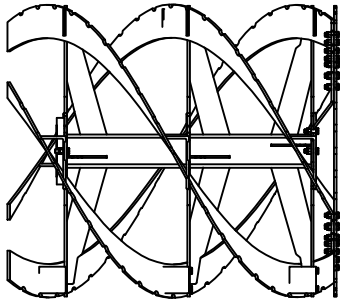
DRAWN BY JND DATE 01/04/2020

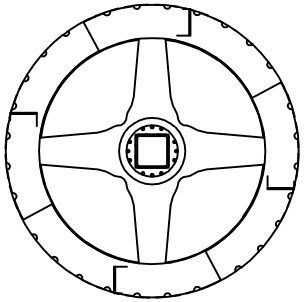
SCALE: 3:2

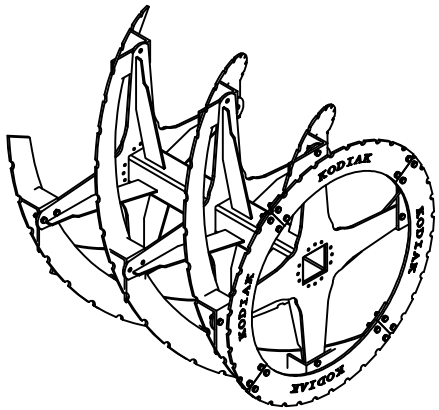
WEIGHT:

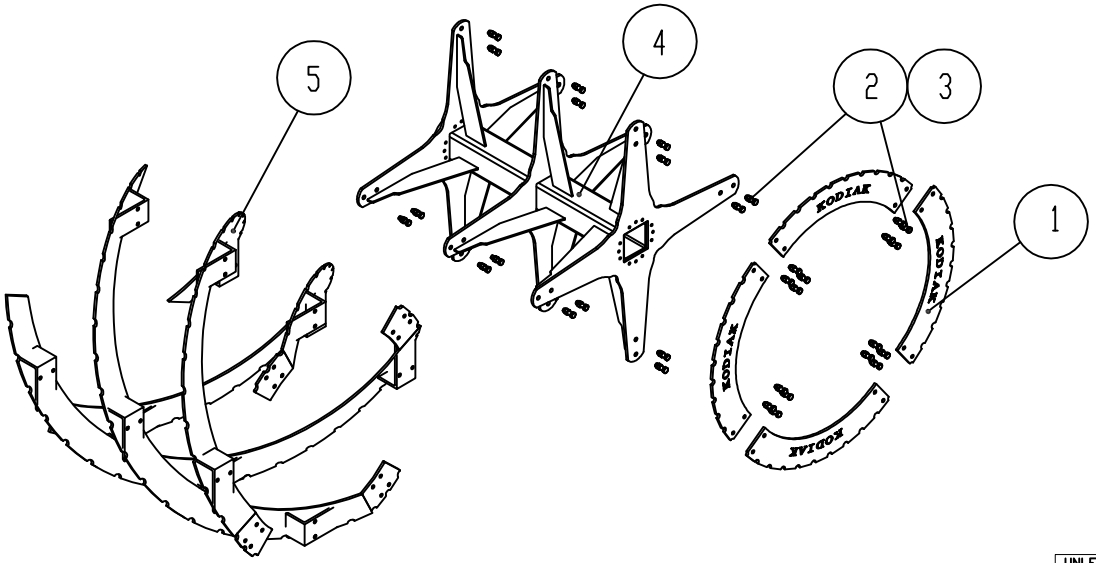
SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	550S-1002327	End Ring	4
2	M14X45-P1.5	Bolt	40
3	M14-P1.5	Bolt	40
4	550S-1002320	RE-44-108-WLD-LEFT	1
5	550S-1002310	FL-44-108-WLD-LEFT	4









KODIAK

DO NOT SCALE DRAWING

MATERIAL

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Reference dimensions are in ( )

TOLERANCES:
Fractional: 1/8"
Angular: MACH ±0.5° BEND ±2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx±0.03

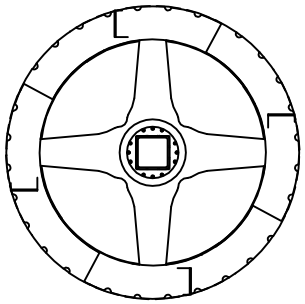
Part Description
Ree-44-108-WLD-Left

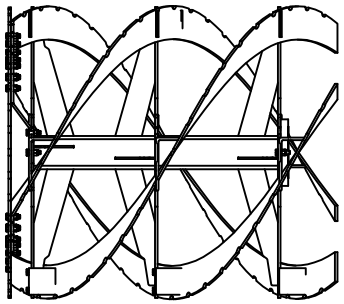
Part Number
550S-1001100

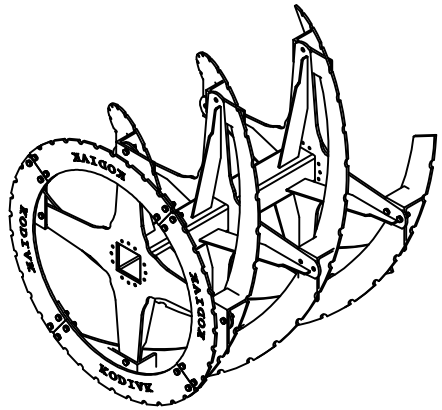
Revision
-0

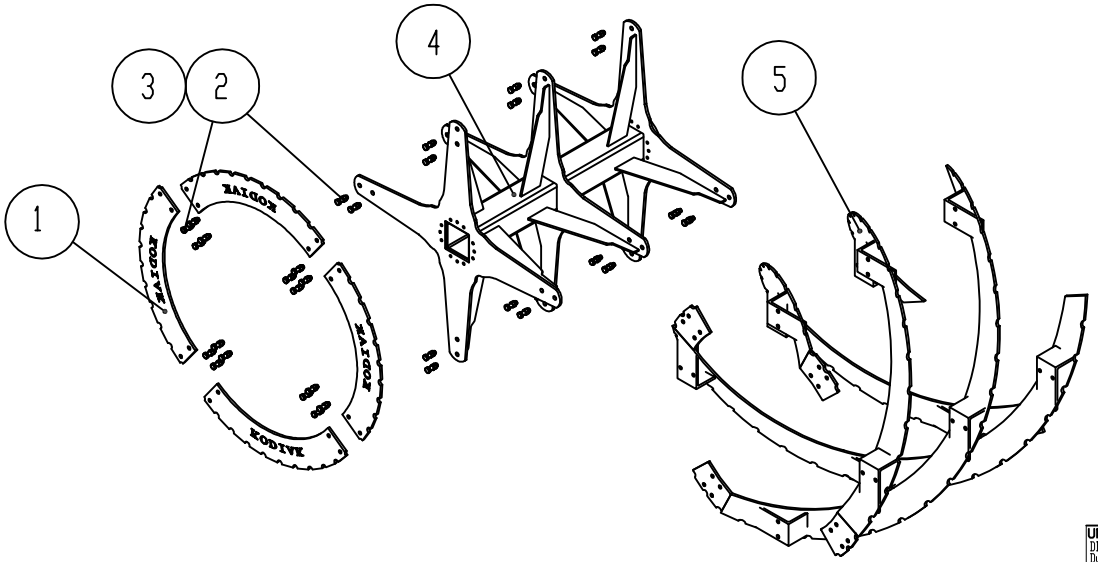
DRAWN BY JND DATE 01/04/2021 | SCALE: 3:8 | WEIGHT: | SHEET 1 OF

Num	Part Num.	Description	Quantity
1	550S-1002327	End Ring	4
2	M14X45-P1.5	Bolt	40
3	M14-P1.5	Bolt	40
4	550S-1002330	RE-44-108-WLD-RIGHT	1
5	550S-1002340	FL-44-108-WLD-RIGHT	4









KODIAK

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MATERIAL

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TOLERANCES:
Fractional: 1/8"
Angular: MACH ±0.5° BEND ±2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx±0.03

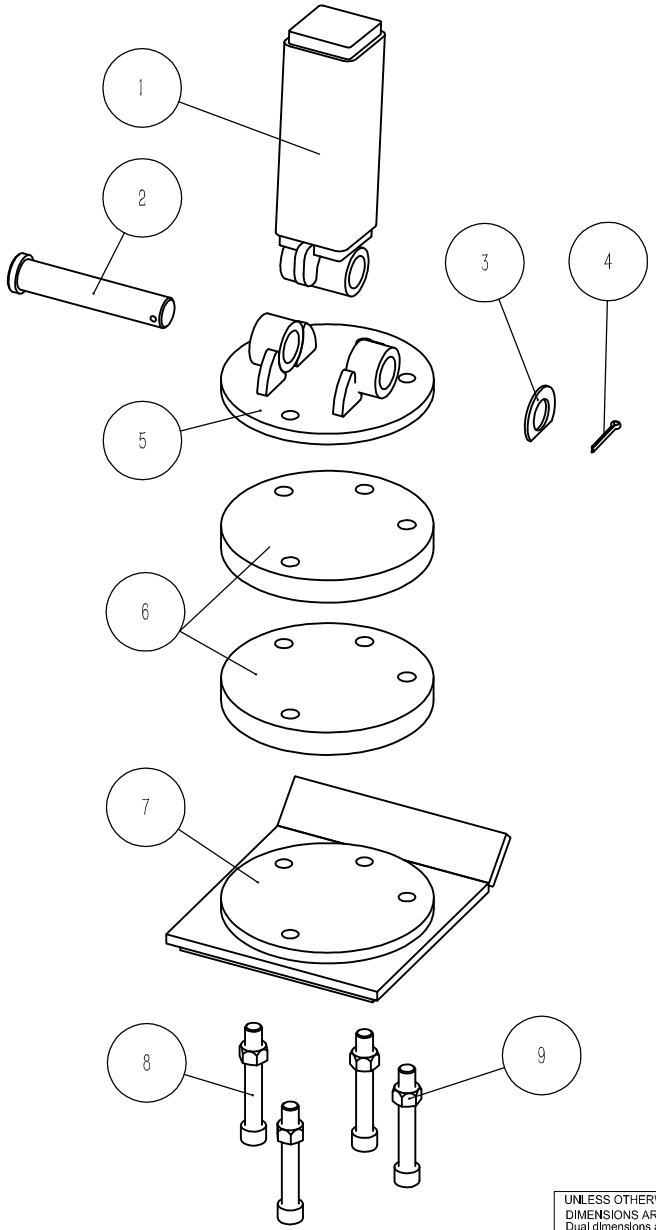
Part Description
Ree-44-108-WLD-Right

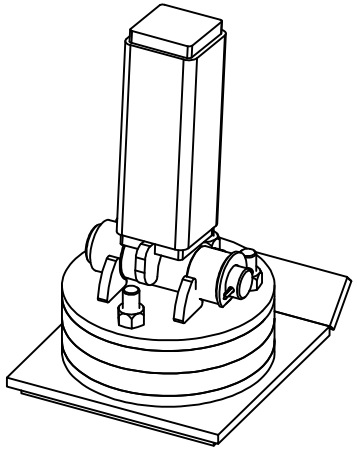
Part Number
550S-1003700

Revision
-0

DRAWN BY JND DATE 01/04/2021 | SCALE: 3:8 | WEIGHT: | SHEET 1 OF

Num	Part Num.	Description	Quantity
1	550S-1003210	support tube assembly	1
2	550S-1003232	pad connecting shaft	1
3	Q401B30	flat washers	1
4	Q5000570	cotter pin	1
5	550S-1003220	fixed seat	1
6	550S-1006123	adjusting washer	2
7	550S-1003240	sliding shoe support base	1
8	Q218B16110T32	hexagon socket bolts	4
9	M16x1.5	anti-separation nut	4





KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

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Reference dimensions are in ( )

TOLERANCES:
Fractional ± 1/8"
Angular: MACH ± 0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

Part Description
Bootship

Part Number
550S-1002060

Revision
-0

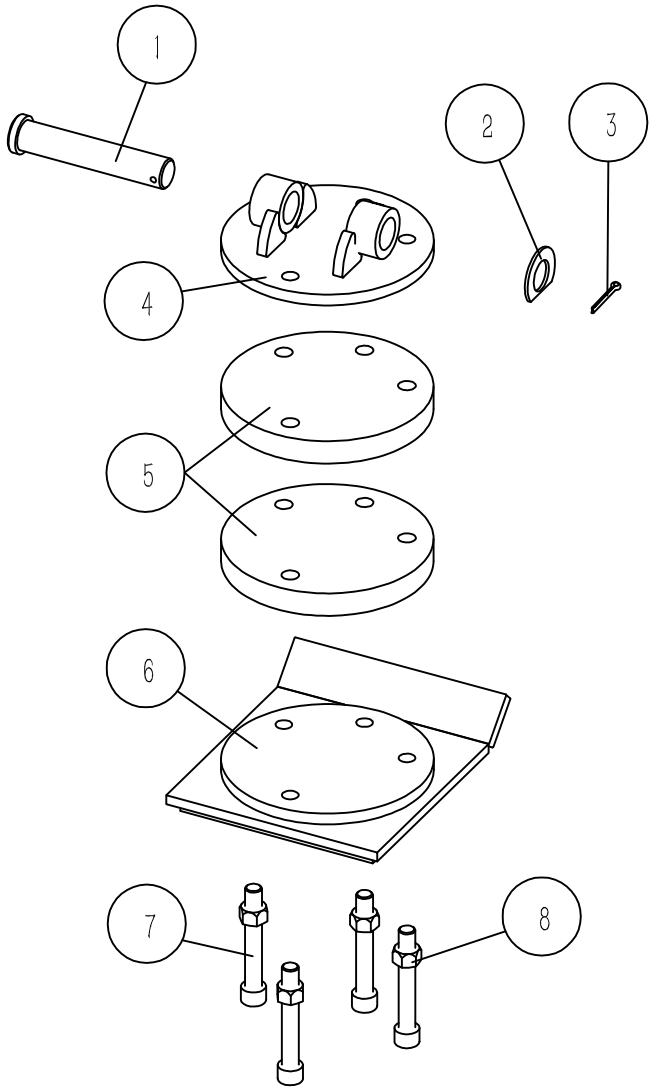
DRAWN BY JND DATE 02/29/2024

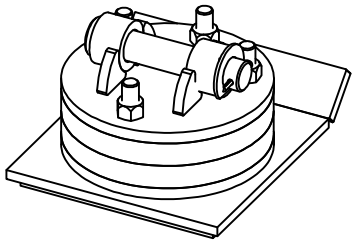
SCALE: 1:5

WEIGHT:

SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	550S–1003232	pad connecting shaft	1
2	Q401B30	flat washers	1
3	Q5000570	cotter pin	1
4	550S–1003220	fixed seat	1
5	550S–1006123	adjusting washer	2
6	550S–1003240	sliding shoe support base	1
7	Q218B16110T32	hexagon socket bolts	4
8	M16x1.5	anti–separation nut	4





KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

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Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

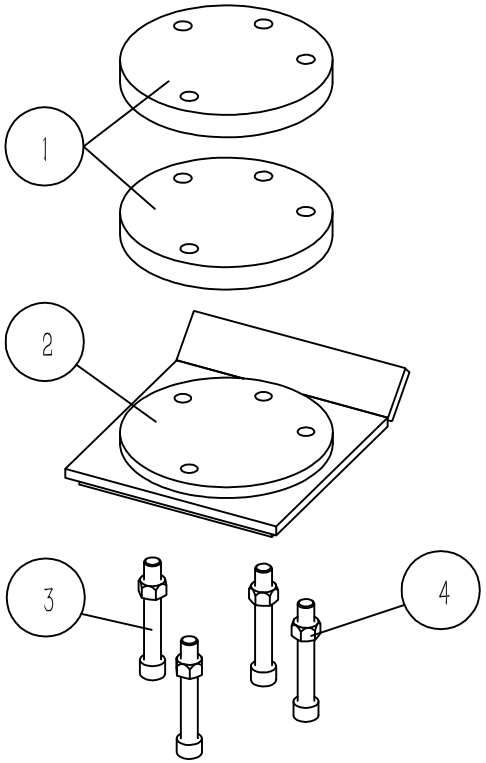
Part Description
Skipper

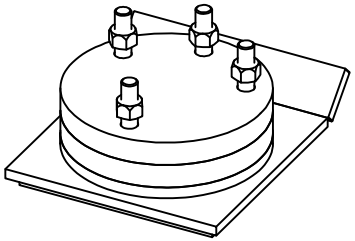
Part Number
550S–1002050

Revision
–0

DRAWN BY JND DATE 02/29/2024 | SCALE: 1:5 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	550S-1006123	adjusting washer	2
2	550S-1003240	sliding shoe support base	1
3	Q218B16110T32	hexagon socket bolts	4
4	M16x1.5	anti-separation nut	4





KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

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Reference dimensions are in ( )

TOLERANCES:
Fractional ± 1/8"
Angular: MACH ± 0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

Part Description
Sliding shoe base assembly

Part Number
550S-1003250

Revision
-0

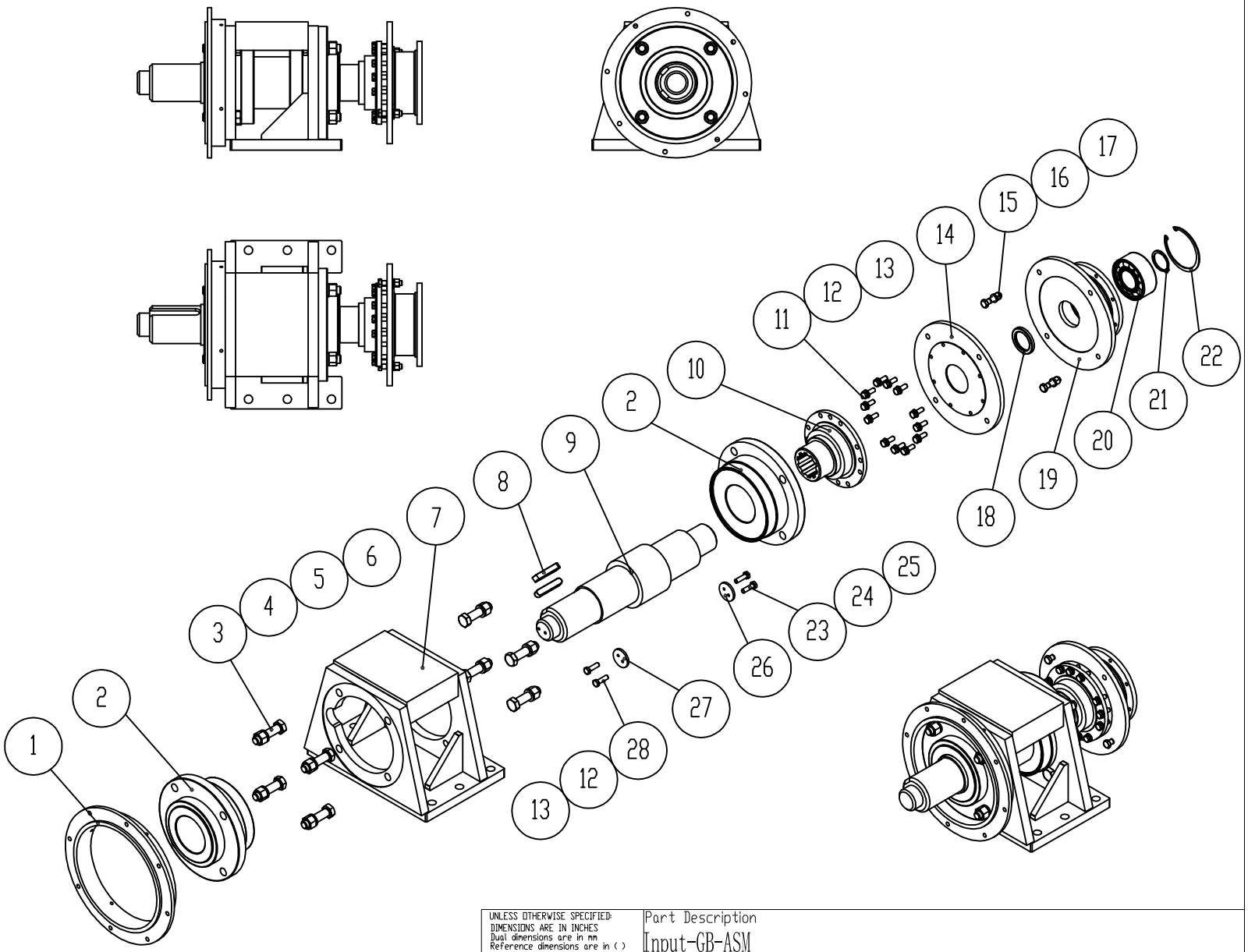
DRAWN BY JND DATE 02/29/2024

SCALE: 1:5

WEIGHT:

SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	450S-K00539(-1)	Volute Guide	1
2	450S-K00538(-0)	Moline Bearing	2
3	M20X80	Bolt	8
4	ø20	Washer	8
5	ø20	Spring Washer	8
6	M20	Nut	8
7	550S-1003160	Frame Bottom	1
8	550S-0300475	Key	2
9	450S-K03167(-2)	Shaft	1
10	450S-K01415 (-0) G	Input Flange	1
11	M10X25-P1.5	Bolt	8
12	ø10	Washer	10
13	ø10	Spring Washer	10
14	450S-P2A347-1(-0)G	Flange	1
15	K00002	Shear Pin	2
16	ø12	Spring Washer	2
17	M12X1.25	Bolt	2
18	K00679	Seal	1
19	450S-P2A391-3(-0)G	Shear Pin Flange	1
20	K00678	Bearing	1
21	Q43150	Snap Ring	1
22	Q130110	Snap Ring	1
23	M12X35-P1.75	Bolt	2
24	ø12	Washer	2
25	ø12	Spring Washer	2
26	550S-1007166	Cap	1
27	550S-1007168	Cap	1
28	M10*30-P1.5	Washer	2



KODIAK

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MATERIAL

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TOLERANCES:
Fractional: 1/8"
Angular: MACH ±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

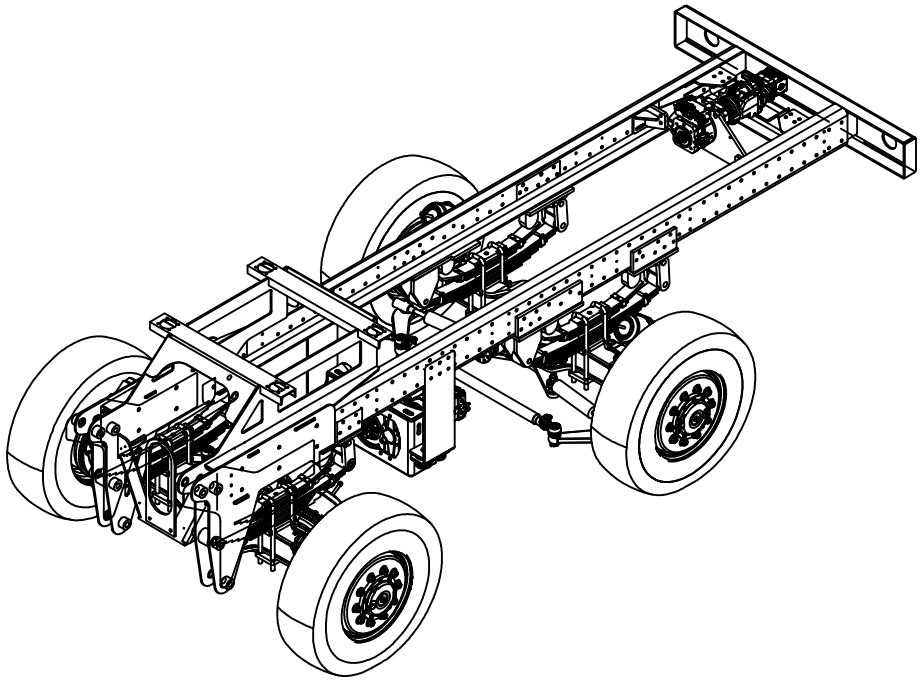
Part Description
Input-GB-ASM

Part Number
450S-K10601-A-1

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	550S–K04239	Cab Support	1
2	550S–K07223	Transmission Assembly	1
3	K550S–K04308(–1)	Rear Leaf Spring Support	2
4	550S–K04353(A0)	Right Rear Leaf Spring Rront Mount	1
5	K550S–0400040	Leaf Spring Right Rear Support	1
6	550S–K07632	Pump Support 1	1
7	550S–K05571(–1)	Pump Support 2	1
8	450S–K04170(–0)	Pump Drive Assembly	1
9	HPV02–105L–E1D2	Drive Pump	1
10	PV_JR_L_S45B_PC_21	Work Pump	1
11	KP30.31S0	Steering Pump	1
12	550S–K07632	Pump Mount	1
13	550S–K05004	Right Frame	1
14	550S–K05003	Left Frame	1
15	450S–K05040(A0)	Bumper	1
16	550S–0104040	Rear Cross Weldment	1
17	550S–0104045	Rear Cross Mount2	2
18	550S–0104044	Rear Cross Mount1	2
19	K550S–040030	Spring Hanger upper Weldment	1
20	450S–K04309(–1)	Spring Hanger Lower Weldment	4
21	K550S–K04346(–G)	Right Rear Leaf Spring Front Support	1
22	HDZ13T341526009	Front Axle	1
23	HDZ13T341526010	Rear Axle	1



KODIAK

DRAWING NOT TO SCALE

MATERIAL

FINISH

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH±0.5° BEND±2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Chassis Assembly

Part Number
550S–0101000–1

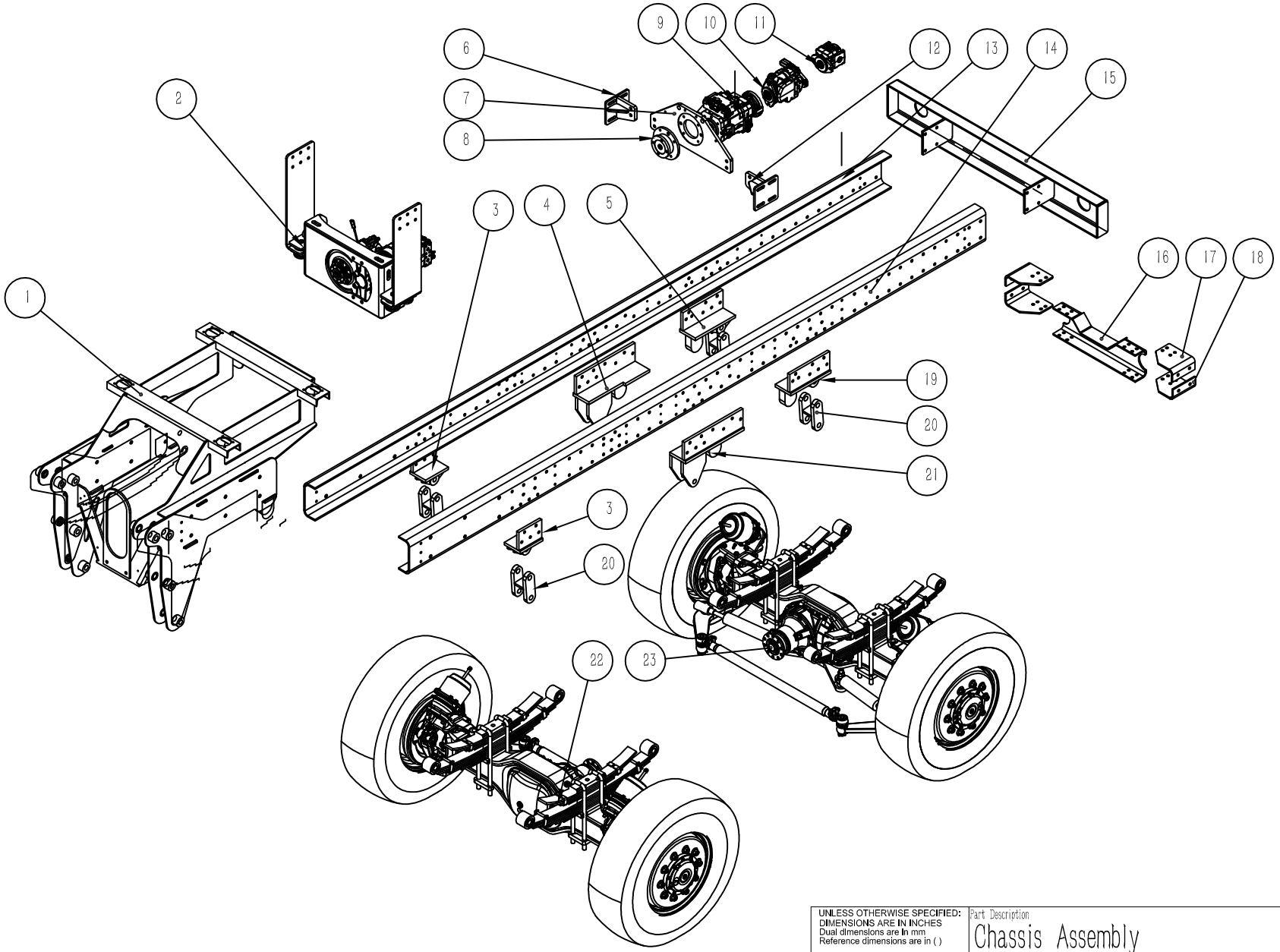
Revision
–0

DRAWN BY: JND DATE 01/04/2020

SCALE: 3.2

WEIGHT:

SHEET 1 OF 1



KODIAK

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Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

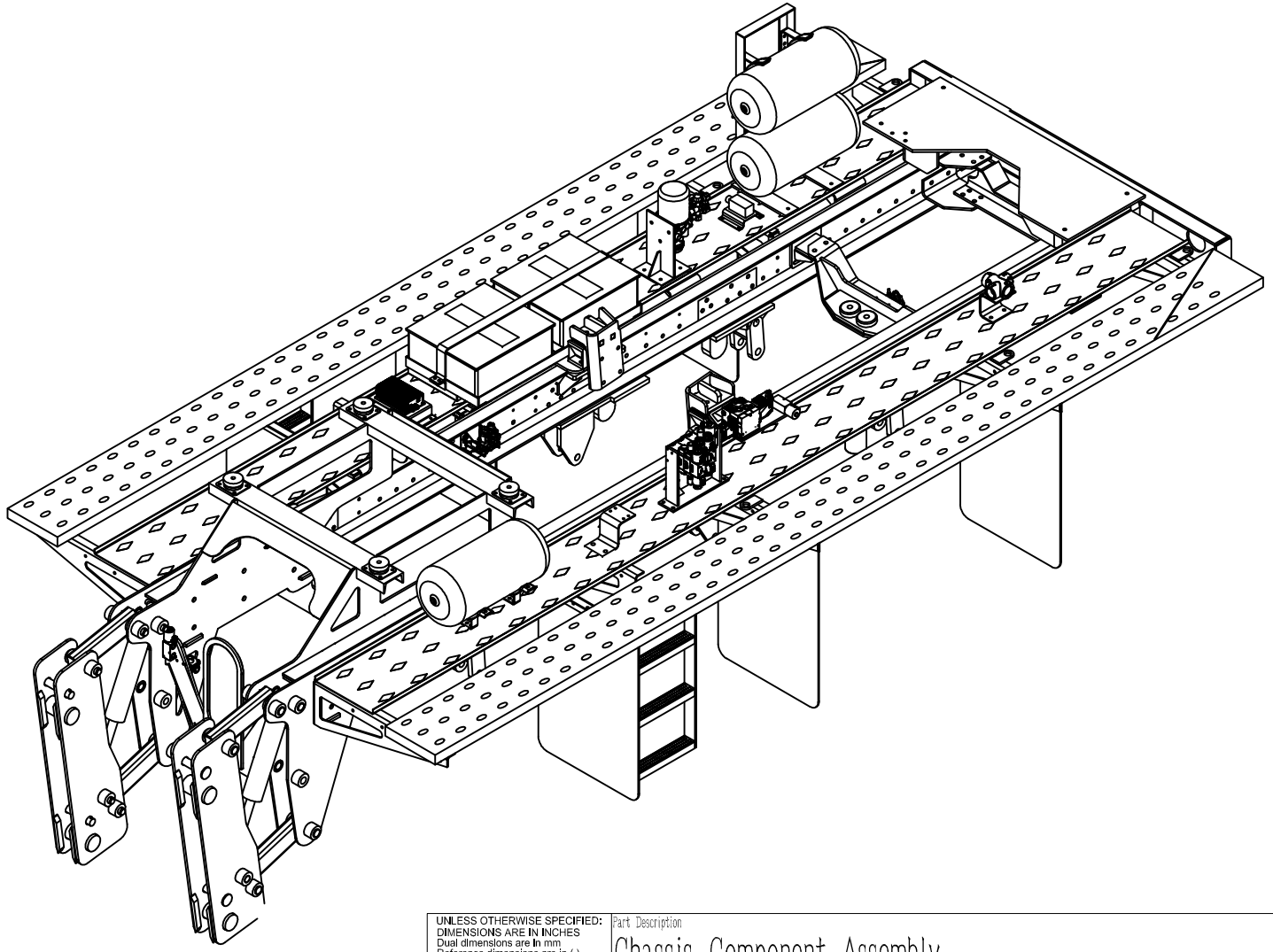
Part Description
Chassis Assembly

Part Number
550S-0101000-2

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	TN4313LY-3513015K	Air Tank	1
2	sc2-mlmed-4120009	Valve Bank	1
3	PVG32-1	Danfoss Valve	1
4	EPC102CN-P21F40-G06-24DD	Flow Control Valve	1
5	PBF0160F010NB16N	Hydraulic Pressure Filter	1
6	TV-12	Thermostat	1
7	TN4313LY-3513015K	Air Tank	2
8	9325000610	Air Dryer	1
9	6-QW-180	Battery	4
10	FS36230	Fuel And Water Separator	1
11	HWC3-24V10A	Charger	1
12	EC102CN-P25F76-G06-24DD	Lock Valve	2
13	K9735000000	Quick Relief Valve	1
14	K04398	Lift Cylinder	2
15	22004-3	Isolator	6
16	450S-K04507(A0)	Hitch	2
17	4722720230	Air Valve Bank	1
18	RV-DN12-G1/2	Check Valve	1
19	H73-3721010	Horn	1



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Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

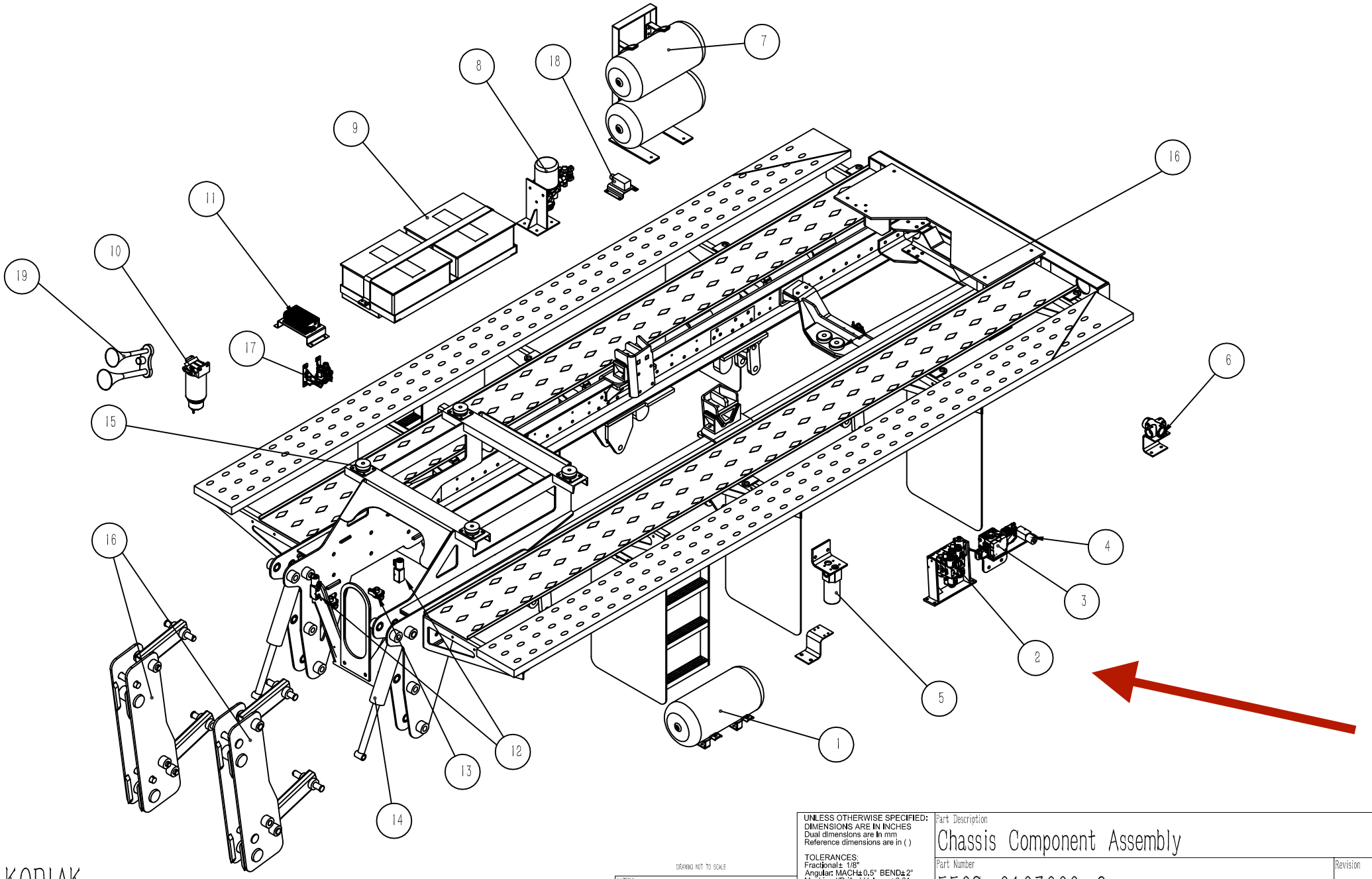
All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Chassis Component Assembly

Part Number
550S-0103000-1

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1



KODIAK

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Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Chassis Component Assembly

Part Number
550S-0103000-2

Revision
-0

DRAWN BY JND DATE 01/04/2020

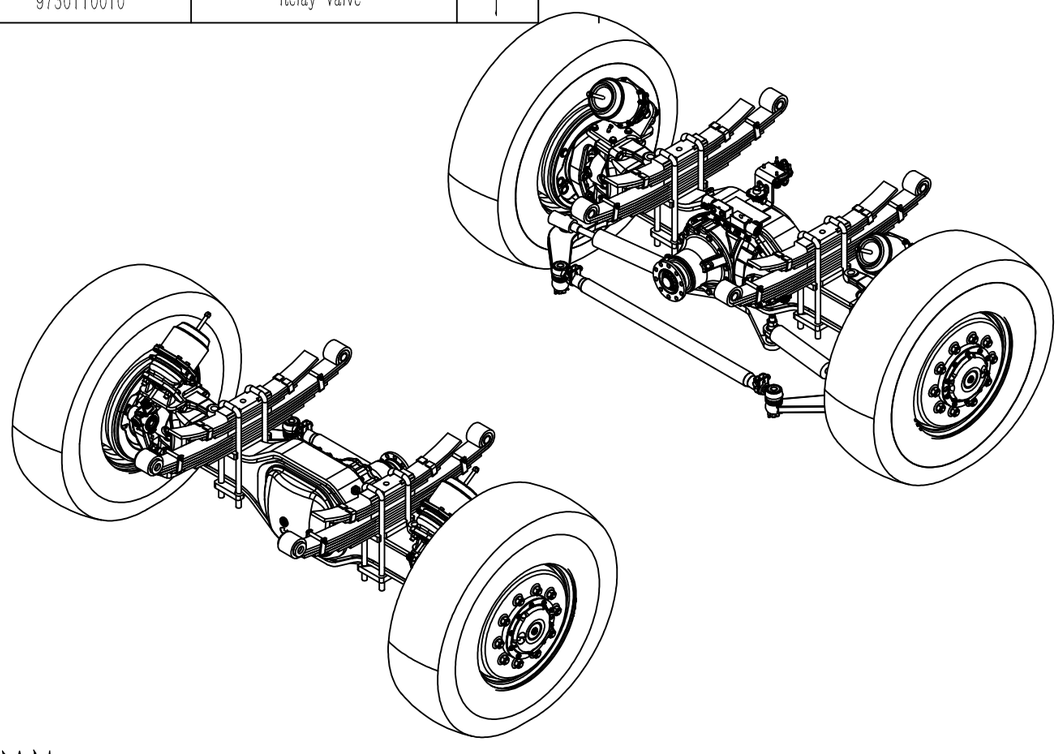
SCALE: 3:2

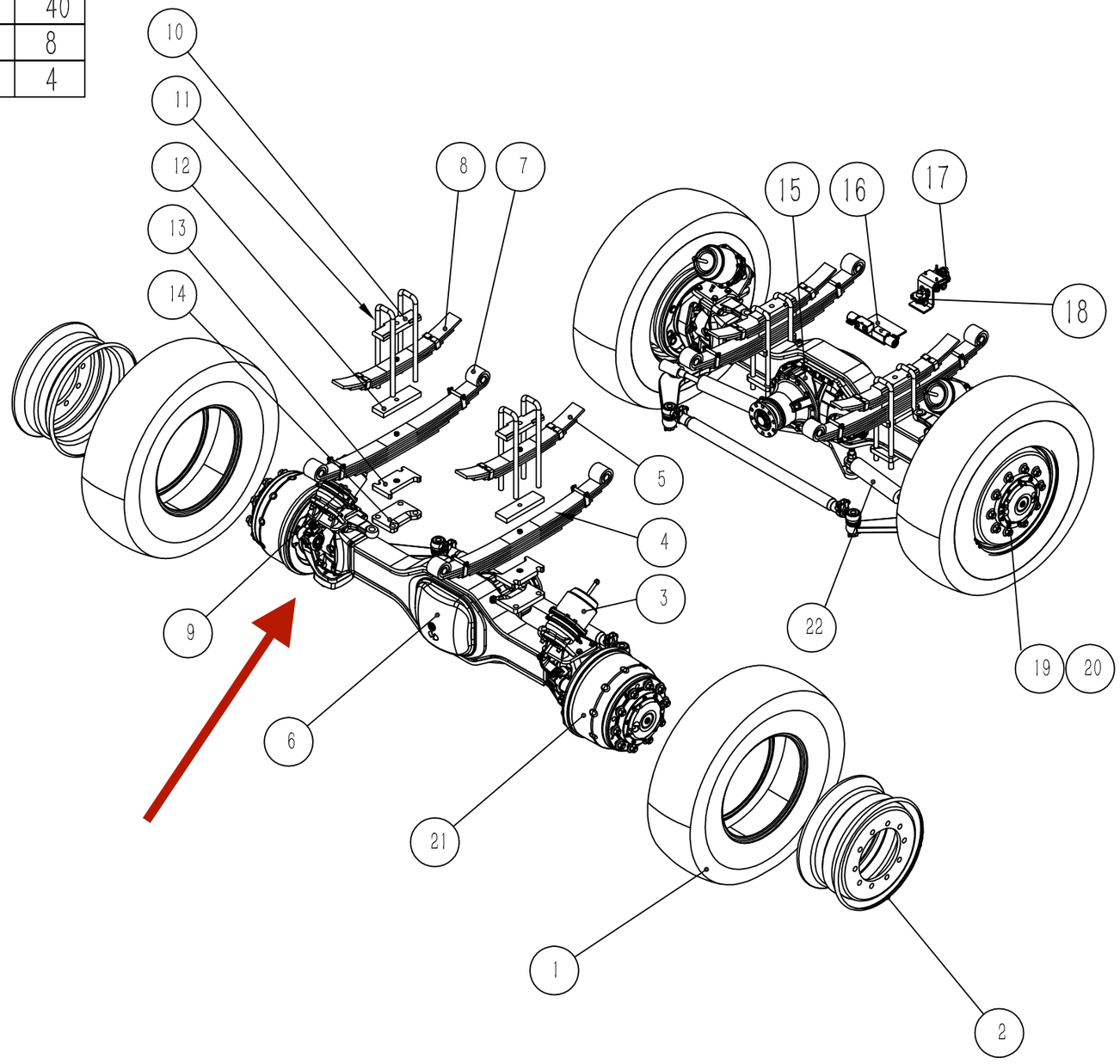
WEIGHT:

SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	385/65R22.5–20PR AGC28	Tire	4
2	22111045	Wheel	4
3	Φ410×180	Brake chamber (Left)	2
4	YK04159,–0 L	Leaf Spring	2
5	YK04160,–0 L	Overload Spring Left	2
6	HDZ13T341526009	Front Axle	1
7	YK04159,–0 R	Left Spring Right	2
8	YK04160,–0 R	Overload Spring Right	2
9	Φ410×180	Brake chamber (Right)	2
10	450S–K06758(–0)	Spring Top plate	4
11	K06669(4)–G	Spring U–Bolt	8
12	450S–K04595(B1)	Spring Shim	4
13	K06760(–1)	Spring Axle Top Plate	4
14	K06761(–1)	Spring Axle Bottom Plate	4
15	HDZ13T341526010	Rear Axle	1
16	EC102CN–P23F76–G06–24DD C02333080130140	Hydraulic Lock Valve	2
17	9735000000	Quick Release Valve	3
18	9730110010	Relay Valve	1

Num	Part Num.	Description	Quantity
19	H150A22115AZF3	Lug Nut	40
20	M22	Bolt	40
21	HD95009440007	Brake Pad	8
22	K06672	Steering Cylinder	4





KODIAK

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Fractional± 1/8"
Angular: MACH±0.5° BEND±2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

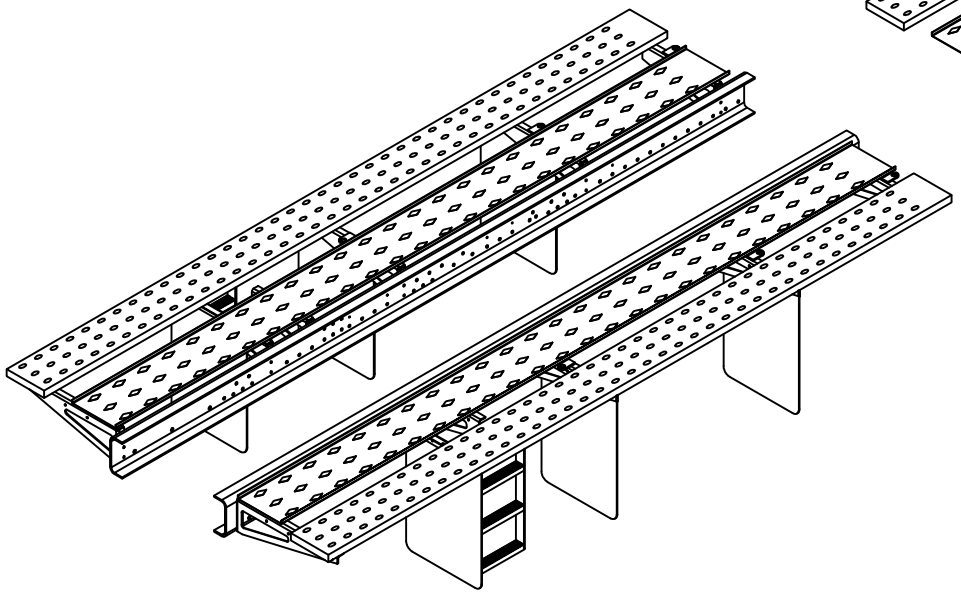
Part Description
Axle Assembly

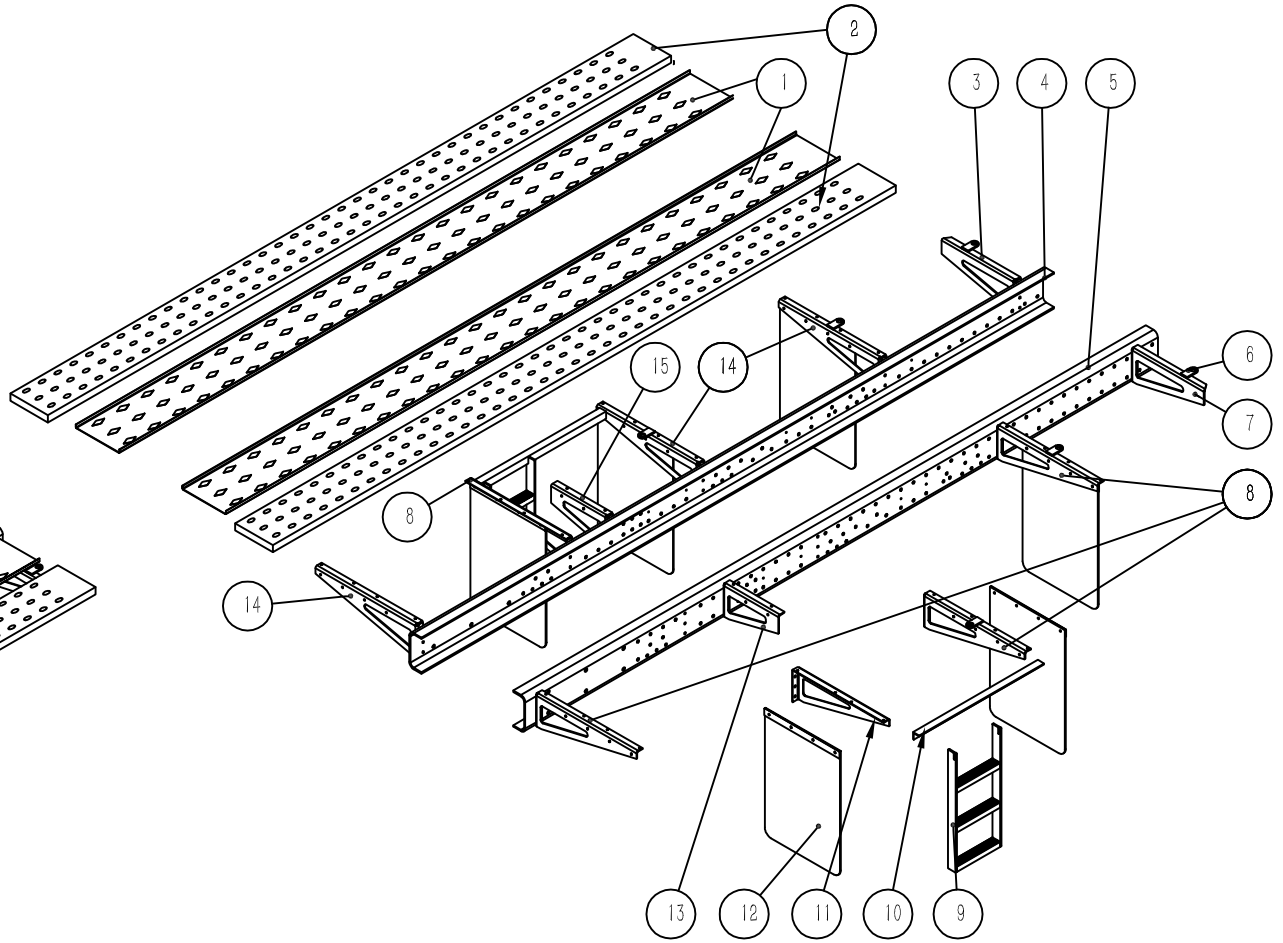
Part Number
550S–0201000

Revision
–0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3.2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	550S–K05066	Inner Catwalk	2
2	550S–K05067	Outer Catwalk	2
3	550S–K07464(–0)	Outer Catwalk Support 1	1
4	550S–K05004	Frame–Right	1
5	550S–K05003	Frame–Left	1
6	450S–K04247(–0)	Pads Support	6
7	550S–K07468(–0)	Outer Catwalk Support 2	1
8	550S–K05114(A0)	Support Arm 2	4
9	550S–K04380(B0)	Stair Assembly	2
10	450S–K05068(–0)	Stair Support	2
11	550S–K05114(A0)	Mounting Angle	1
12	550S–K05065	Mud Flap	6
13	550S–K07469(–0)	Inner Catwalk Support 1	1
14	550S–K05112(A0)	Support Arm 1	3
15	550S–K07470(–0)	Inner Catwalk Support 2	1





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Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

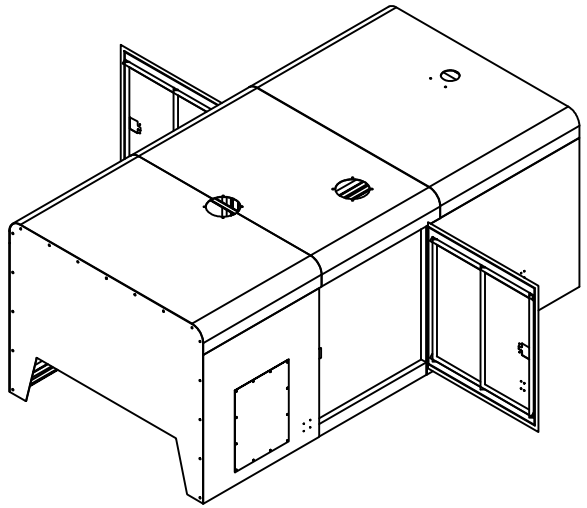
Part Description
Catwalk Assembly

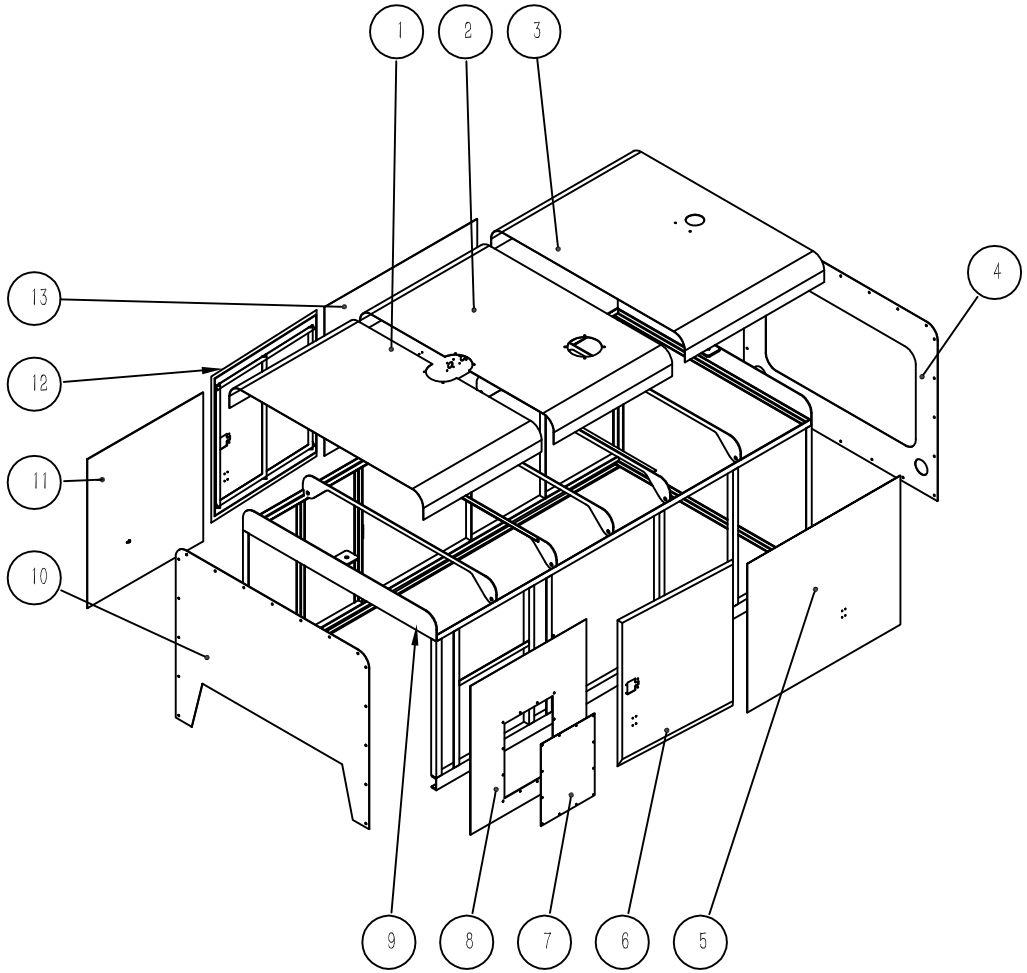
Part Number
550S–0102000

Revision
–0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	550S-0301126	Front Roof	1
2	550S-0301127	Middle Roof	1
3	550S-0301128	Rear Roof	1
4	550S-0301132	Rear Plate	1
5	550S-0301135	Side Panel I	1
6	550S-0301120	Left Door	1
7	550S-0301134	Electrical Door	1
8	550S-0301133	Side Panel II	1
9	550S-0301100	Doghouse Frame	1
10	550S-0301131	Front Plate	1
11	550S-0301136	Side Panel III	1
12	550S-0301120	Right Door	1
13	550S-0301137	Side Panel IV	1





KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
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Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

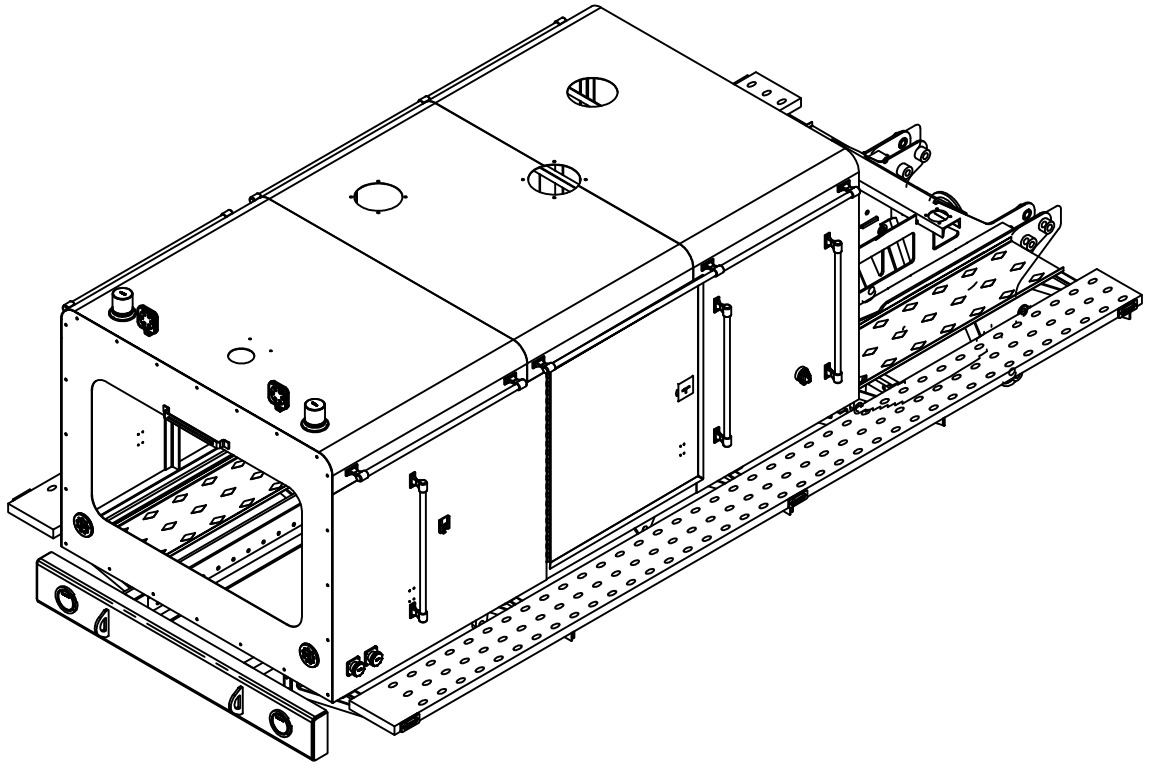
Part Description
Doghouse Assembly

Part Number
550S-0301000

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	550S-0301100	Doghouse	1
2	550S-0102000	Catwalk Assembly	1
3	GS-LCL1101A-001	Light	6
4	550S-1502015	Bracket I	20
5	550S-1502012	Rail II	2
6	550S-1502011	Rail I	6
7	550S-1502014	Bracket II	2
8	75920	On-Off Switch	1
9	MG-F002SS	Door Support	2
10	550S-1502013	Rail III	2
11	MS857	Lock	2
12	CF-218	220V-Power	2
13	LTL1073RF	Brake Lamp	2
14	GS-LTL1073RF-001	Turning Lamp	2
15	LTL3600R	Strip Lamp	1
16	GS-LWL1300-002	Beacon Lamp	2
17	SM6054	Reversing Lamp	2
18	380	Buzzer	2
19	SM9101B123	Doghouse Lamp	2
20	CE4T-10R-11	Emergency switch	1



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Machined/Drilled Holes: ±0.01

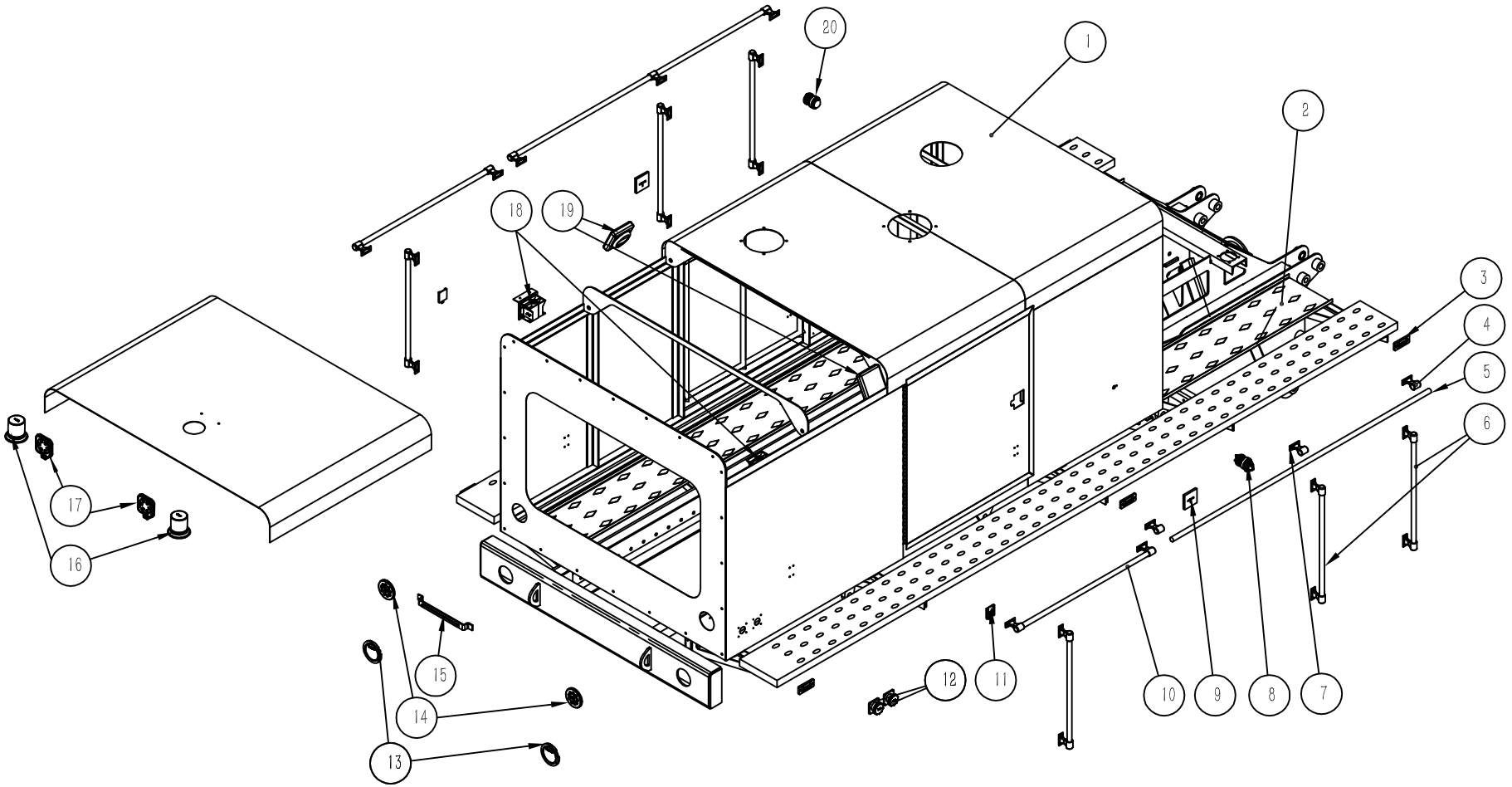
All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Doghouse Component Assembly

Part Number
550S-0311000-1

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1



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MATERIAL

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Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Doghouse Component Assembly

Part Number
550S-0311000-2

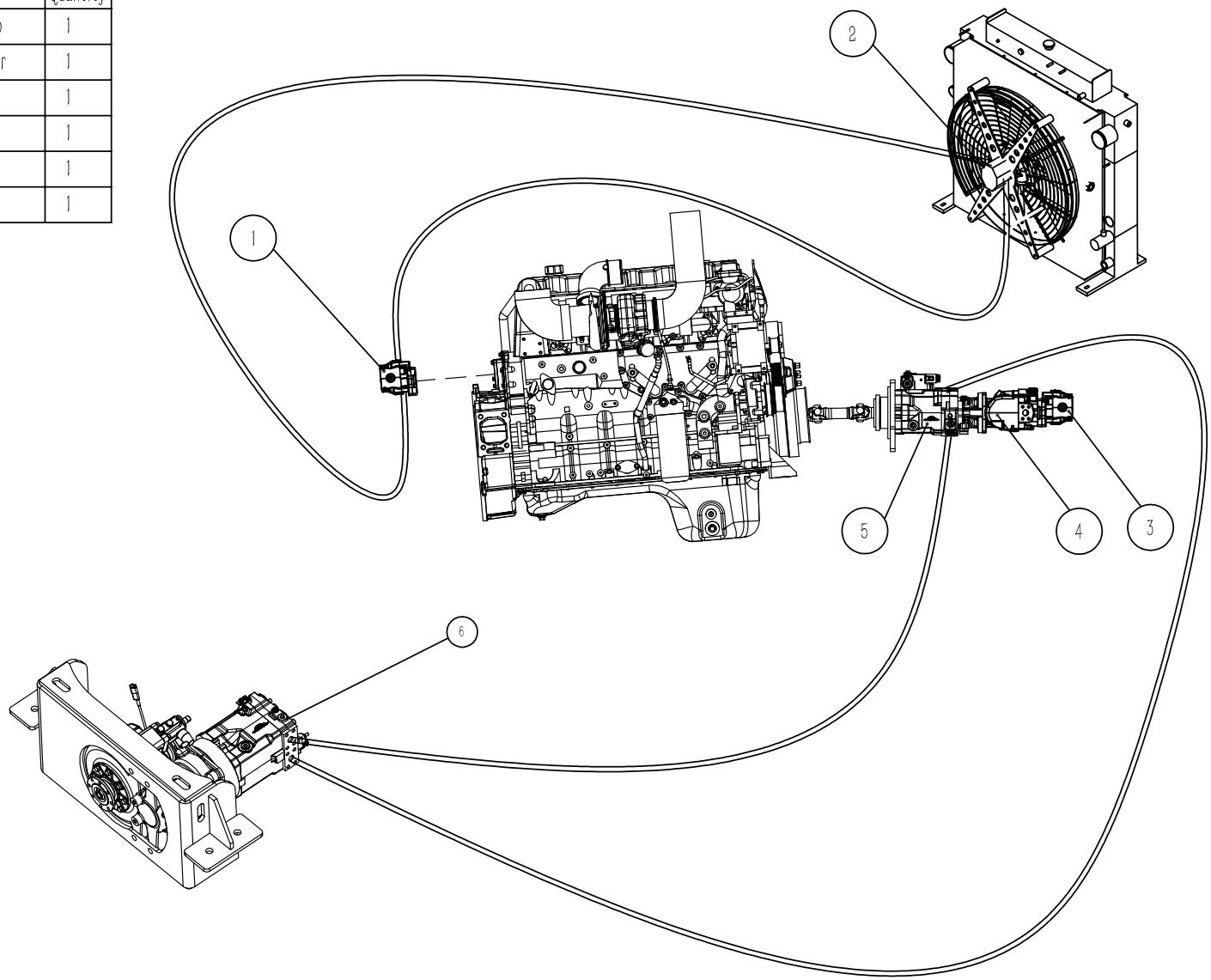
Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	CBHB–F550–AF15	Fan Drive Pump	1
2	CMF–E550S–AFPS	Fan Drive Motor	1
3	KP30.31S0	Steering Pump	1
4	PV_JR_L_S45B_PC_21	Work Pump	1
5	HPV02–105L–E1D2	Drive Pump	1
6	HMV105–E6	Linde motor	1

Working pressures

1. 0-200 bar
3. 0-120 bar
4. 0-140 bar
5. 0-420 bar



KODIAK

DRAWING NOT TO SCALE

MATERIAL

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TOLERANCES:
Fractional± 1/8"
Angular: MACH± 0.5" BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description: Pump–Motor

Part Number: 550S–0500000–3

Revision: –0

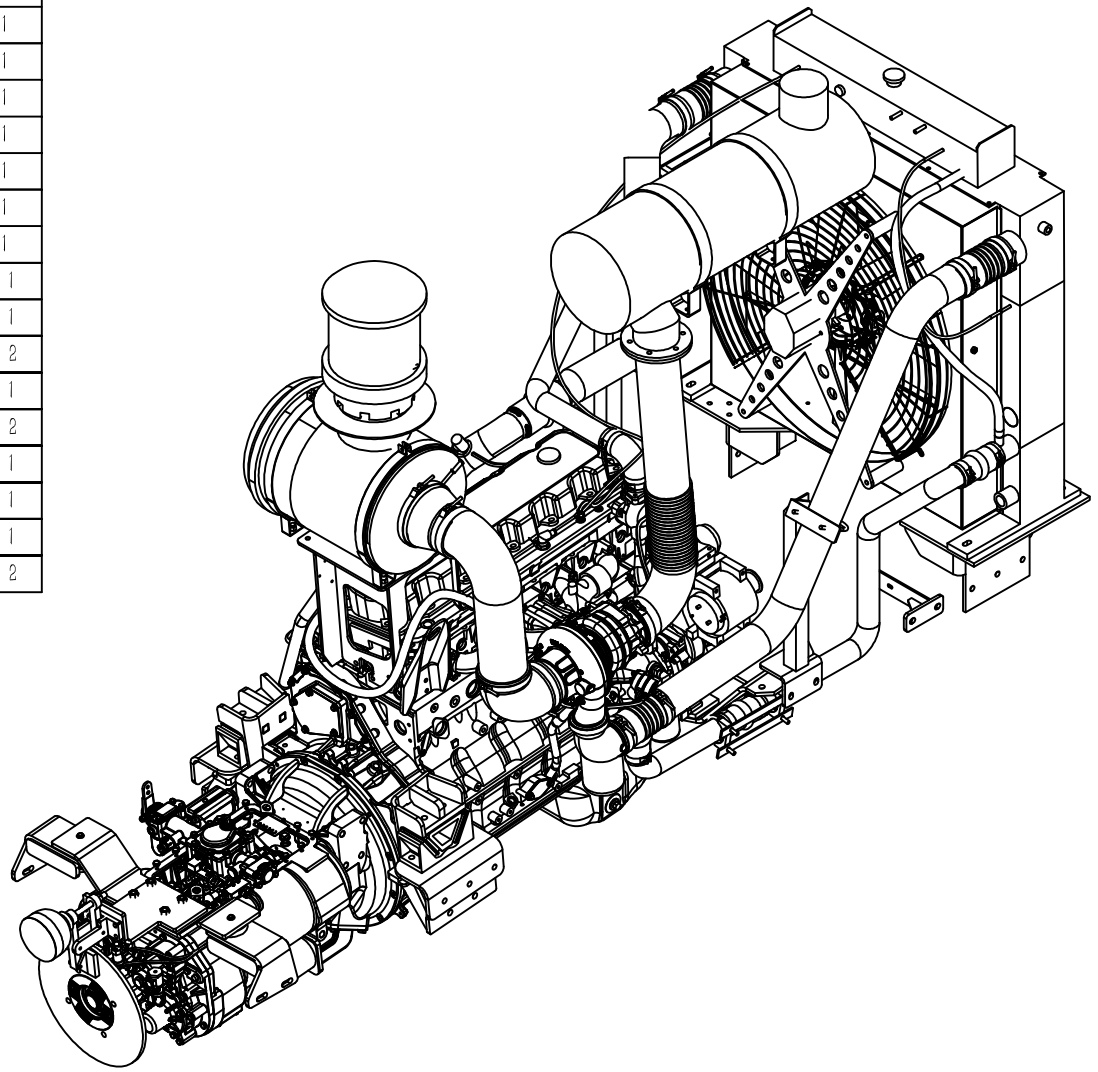
DRAWN BY: JND DATE: 01/04/2020

SCALE: 3.2

WEIGHT:

SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	KA70-9	Prefilter	1
2	216-224	T-Hoop I	1
3	Y060119	Silicone Hose I	1
4	KDYK-IS-G01	Pipe Weldment I	1
5	AH8822	Air Filter	1
6	3630688 (Y0600055)	Silicone Hose II	1
7	186-194	T-Hoop VII	1
8	148-156	T-Hoop III	2
9	Y050621	Air Filter Mount	1
10	550S-0500050	Right Isolator	1
11	12JSD240TA	Transmission	1
12	550S-K05577	Transmission Mount Weldment	1
13	QSZ13-2020-14_ASM	Engine	1
14	550S-0500050	Left Isolator	1
15	Y070917	Stainless Steel Pipe I	1
16	137-145	T-Hoop IV	1
17	Y060001	Silicone Hose III	1
18	CR450S-0599213	Hoop 107-115	6
19	Y3071049(L190)	Silicone Hose Φ102	3
20	186917	V-Hoop V	1
21	KDYK-ES-G01	Pipe Weldment II	1
22	550S-PAIQ001	Exhaust Pipe	1
23	550S-0104150	Engine Front Mount	1
24	550S-1300510	Radiator Mount	1
25	Y000084	Radiator	1
26	KDYK-CS-G01	Stainless Steel Pipe II	1
27	KDYK-CS-G02	Stainless Steel Pipe III	1
28	Y050005-1	Hoop	2
29	LD20121220-03	Muffler	1
30	Y060014-K(L=160)	Silicone Hose Φ63	4
31	67-75	Hoop 67-75	10
32	KDYK-CS-G03	Stainless Steel Pipe IV	1
33	Y060056(H=150)	90° Silicone Hose	1
34	CR450S-0599125	Plate	2
35	CR450S-0599252	T-Hoop 60	2
36	CR450S-0599212	Silicone Hose 90	1
37	CR450S-0599124	T-Hoop 106	2
38	550S-101532	Airpipe Holder	1
39	D25-1500	Compressor Inlet Hose	1
40	KDYK-CS-G05	Coolant Pipe 2	1
41	KDYK-CS-G04	Coolant Pipe 1	1
42	550S-121533	Holder	1
43	550S-101531	Pipe Holder	1
44	D25-120	Coolant Compensate Pipe	1
45	D10-800	Silicone Hose	1
46	D10-2500	Silicone Hose	1
47	WG9725230042GKC105	Air Cylinder	1
48	550S-K055800	Brake Holder	1
49	QDF-2	Brake	1
50	550S-K055798	Flange	1
51	550S-K055788-1	Brake Disk	1
52	10JSX220A-1708090-1	Transmission Cooler	1
53	CBHB-F550-AF15	Fan Drive Pump	1
54	CMF-E550S-AFPS	Fan Drive Motor	1
55	02980900Z	Fuse	2
56	391630221AP33121062800	Relay	1
57	QDF-2 Brake Pad	Brake Pad	2
58	FEC170001-36	Clutch Assembly	1
59	FEC1283022	Clutch Plate	1
60	125693	Clutch Release Bearing	1
61	95-103	Hoop 95-103	2



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DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

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TOLERANCES:
Fractional± 1/8"
Angular: MACH±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Power System Assembly

Part Number
550S-0500000-1A

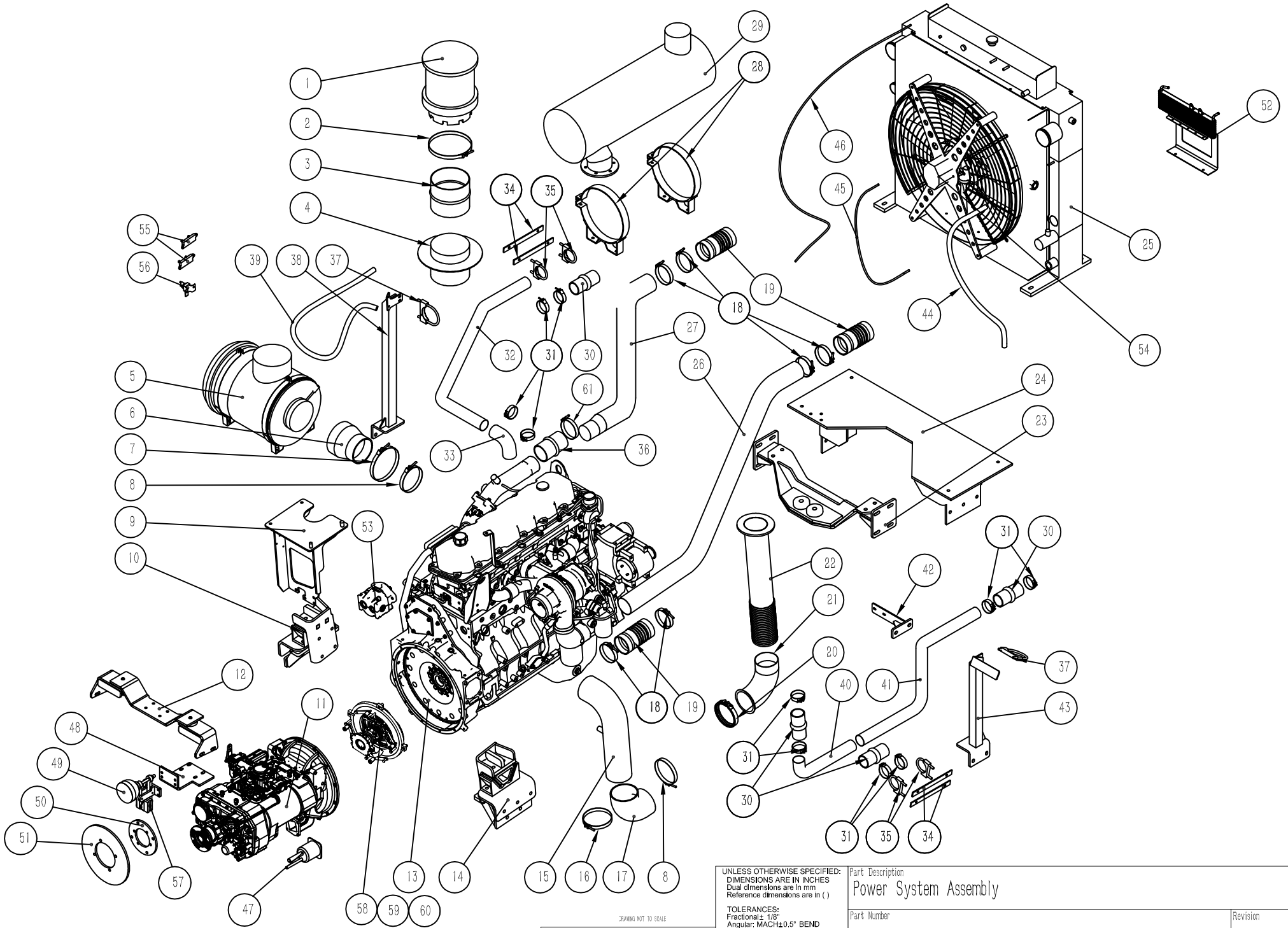
Revision
-1

DRAWN BY JND DATE 02/29/2024

SCALE: 3.2

WEIGHT:

SHEET 1 OF 1



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Angular: MACH±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Power System Assembly

Part Number
550S-0500000-2A

Revision
-1

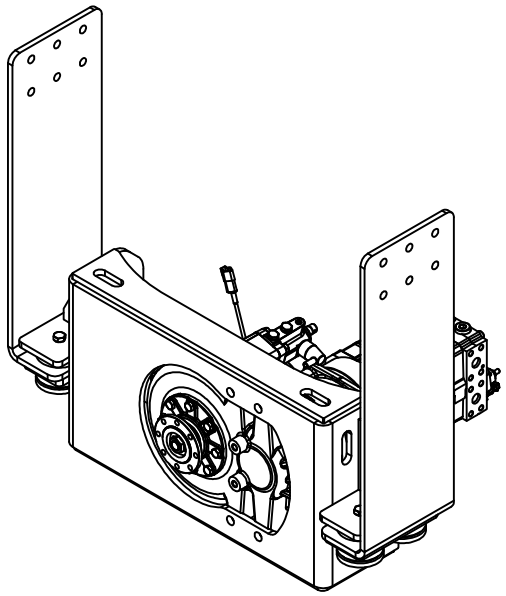
DRAWN BY JND DATE 02/29/2024

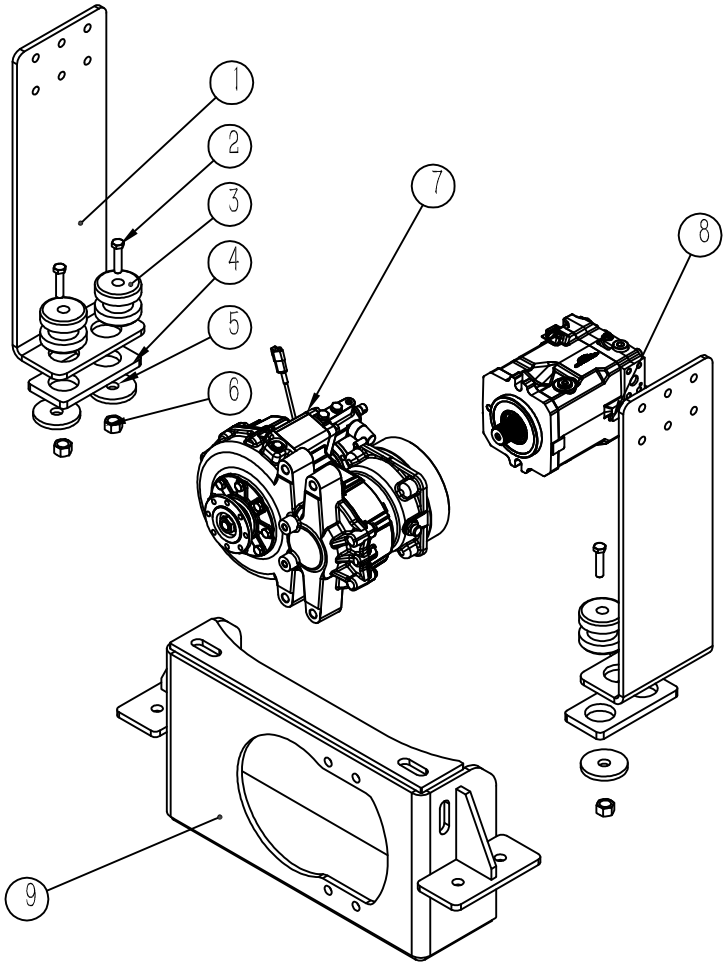
SCALE: 3.2

WEIGHT:

SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	550S-K04832-1	Transmmision Mounting Side Plate	2
2	Q150B22130T	Bolt M22*130	4
3	22004-3	Isolator	4
4	550S-K08589(-0)	Washer	2
5	550S-K05584(-0)	Plate	4
6	DTF6175PTM22*2.5	Nut	4
7	367-97-121	Transfer Case	1
8	HMV105-E6	Linde motor	1
9	550S-K07225	Transmmision Mounting Weldment	1





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TOLERANCES:
Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

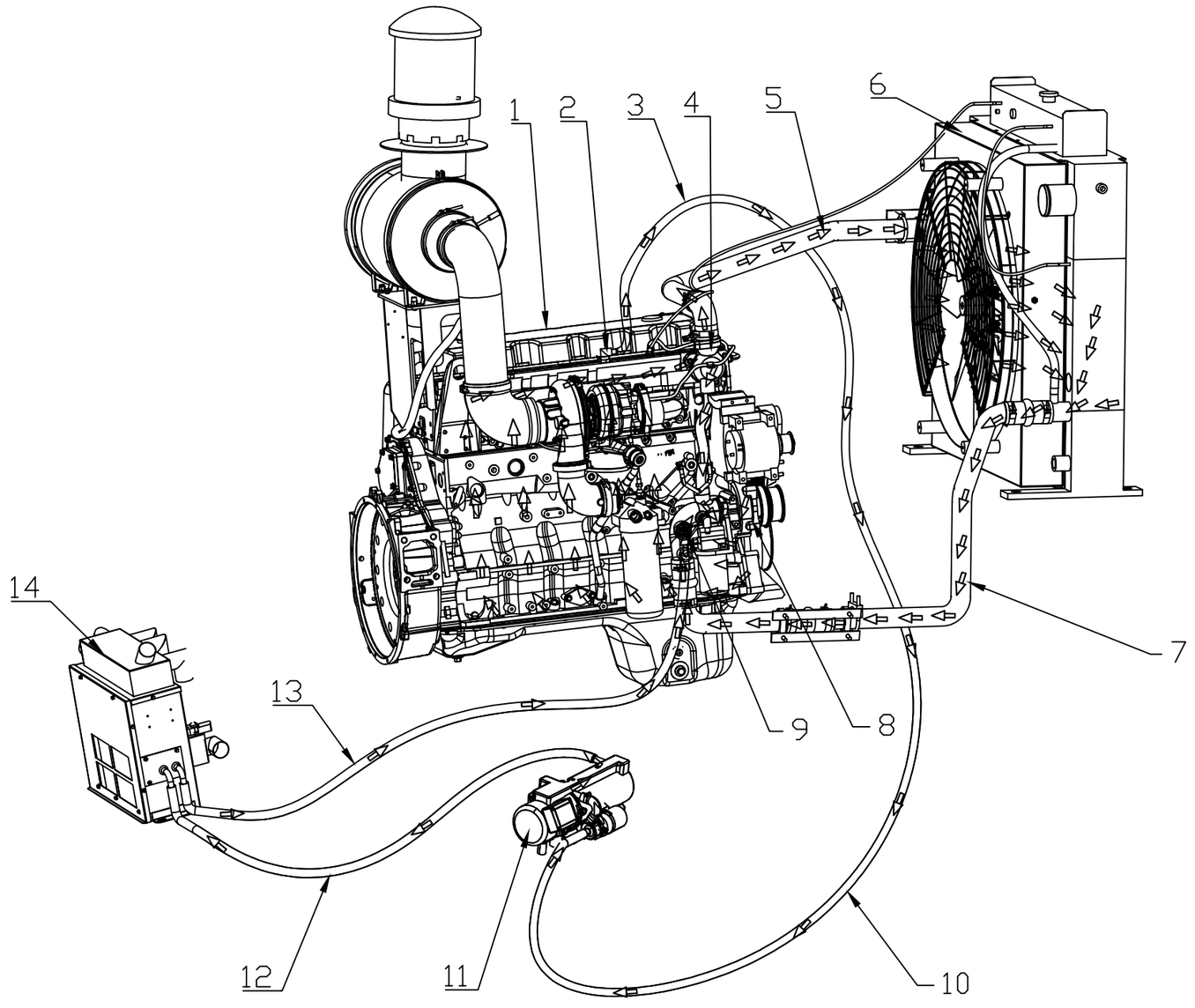
Part Description
Transmmison Assembly

Part Number
550S-1002000

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	QSZ13-C550	Engine	1
2	C2874497	Water-IN	1
3	ø16	Tube	1
4	C4952629	Thermostat	1
5	ø63.5	Tube	1
6	Y000084	Radiator	1
7	ø63.5	Tube	1
8	4974917	Pump	1
9	C2874497	Water-Return	1
10	ø16	Tube	1
11	YJH-Q15A.24V	Heater	1
12	ø16	Tube	1
13	ø16	Tube	1
14	TY46G15AB-ZGZQ-09	Cab heater/heat exchanger	1



KODIAK

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MATERIAL

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TOLERANCES:
Fractional: 1/8"
Angular: MACH ±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

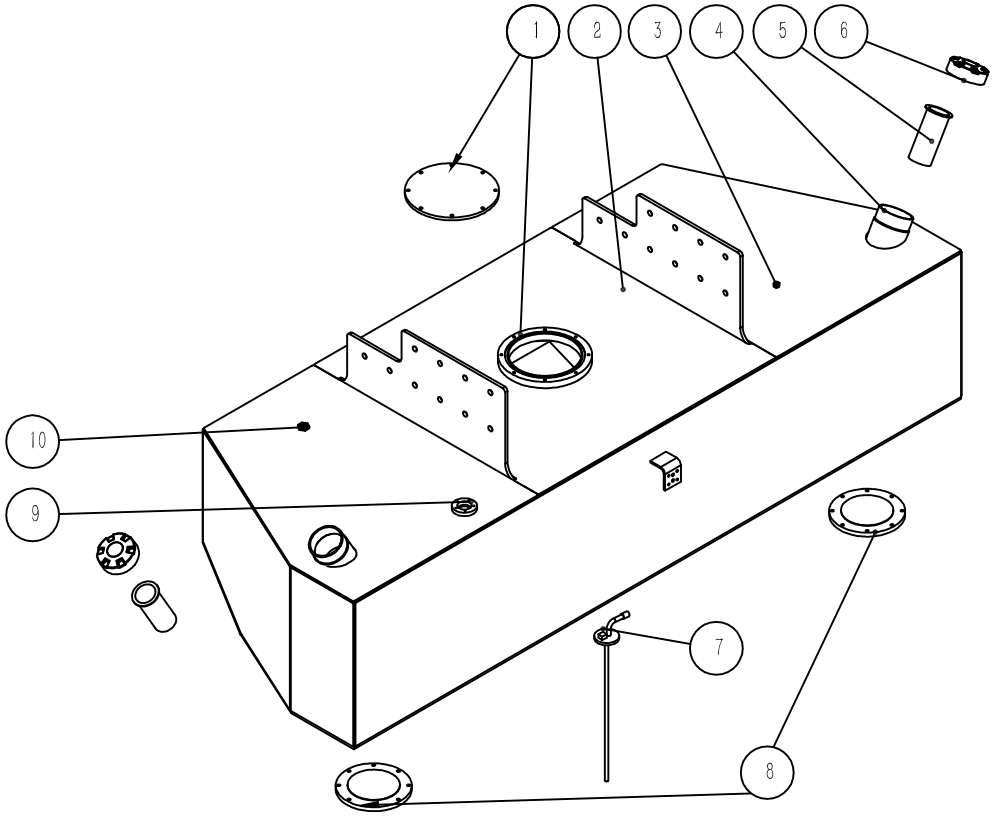
Part Description
Engine Pre-heating

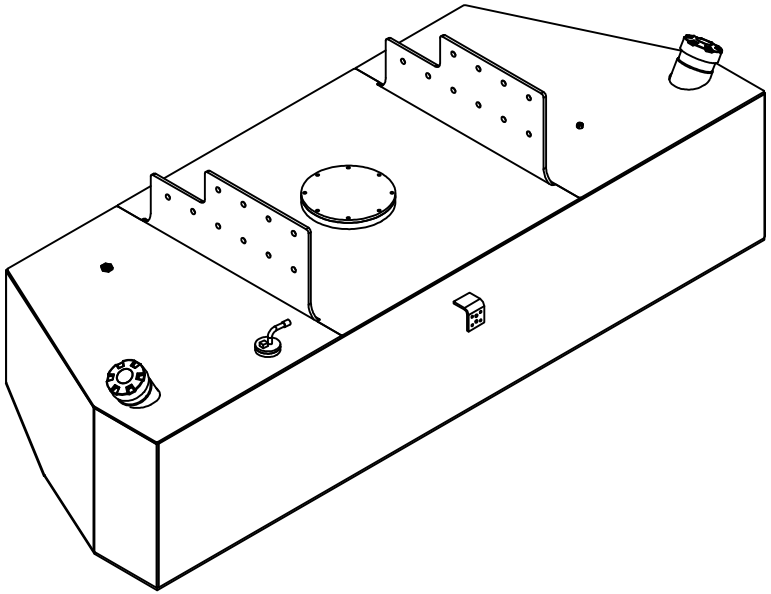
Part Number
CR550S-HEATER+RADIATOR

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	270AB	Fuel Tank Top washing Flange	1
2	550S–0405000	Fuel Tank Body	1
3	GB/T 41–2000	Nut	1
4	KB2128	Fill Spout	2
5	KB4004	Fuel Tank Filter	2
6	PC200	Fuel Tank Cover	2
7	TN–500JKM05123	Level Sensor	1
8	220AB	Fuel Tank Bottom washing Flange	1
9	550S–0405131	Sensor Mounting Flange	1
10	M22*1.5–M16*1.5	Connecter	1





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Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
Fuel Tank Assembly

Part Number
550S–0405100

Revision
–0

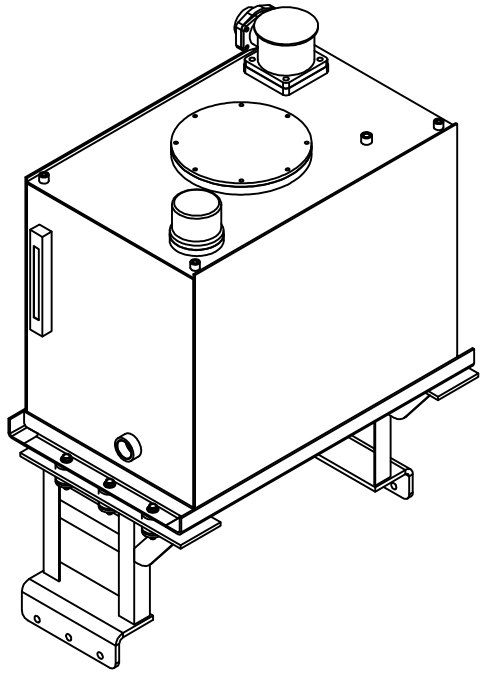
DRAWN BY JND DATE 01/04/2020

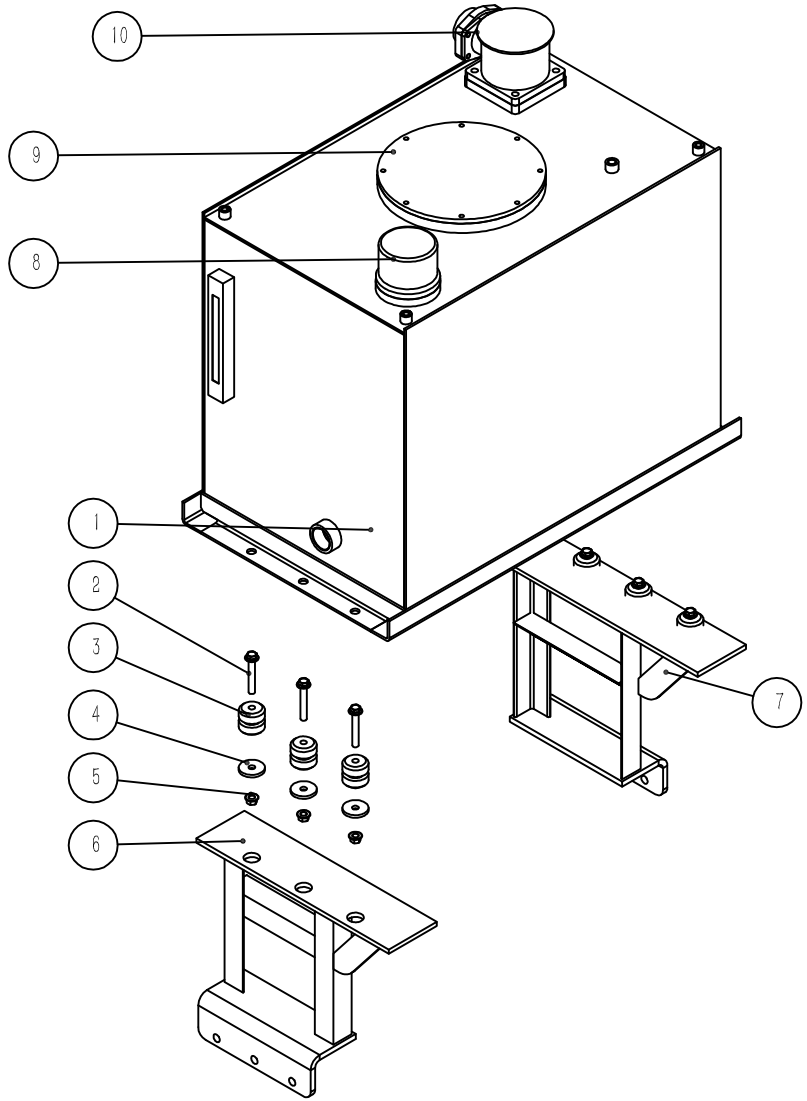
SCALE: 3:2

WEIGHT:

SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	3201-2020.10	Hydraulic Tank	1
2	Q1851280TF30	Bolt	6
3	EH50	Isolator	6
4	550S-1087719	Washer	6
5	Q33012T13F3-P125	Bolt	6
6	550S-0800610	Hydraulic Tank Righ Mount	1
7	550S-0800620	Hydraulic Tank Left Mount	1
8	QUQ2.5-40*2.0	Air Filter	1
9	550S-0800621	Cover	1
10	RFA-400*20F-C	Hydraulic Oil Filter	1





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Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

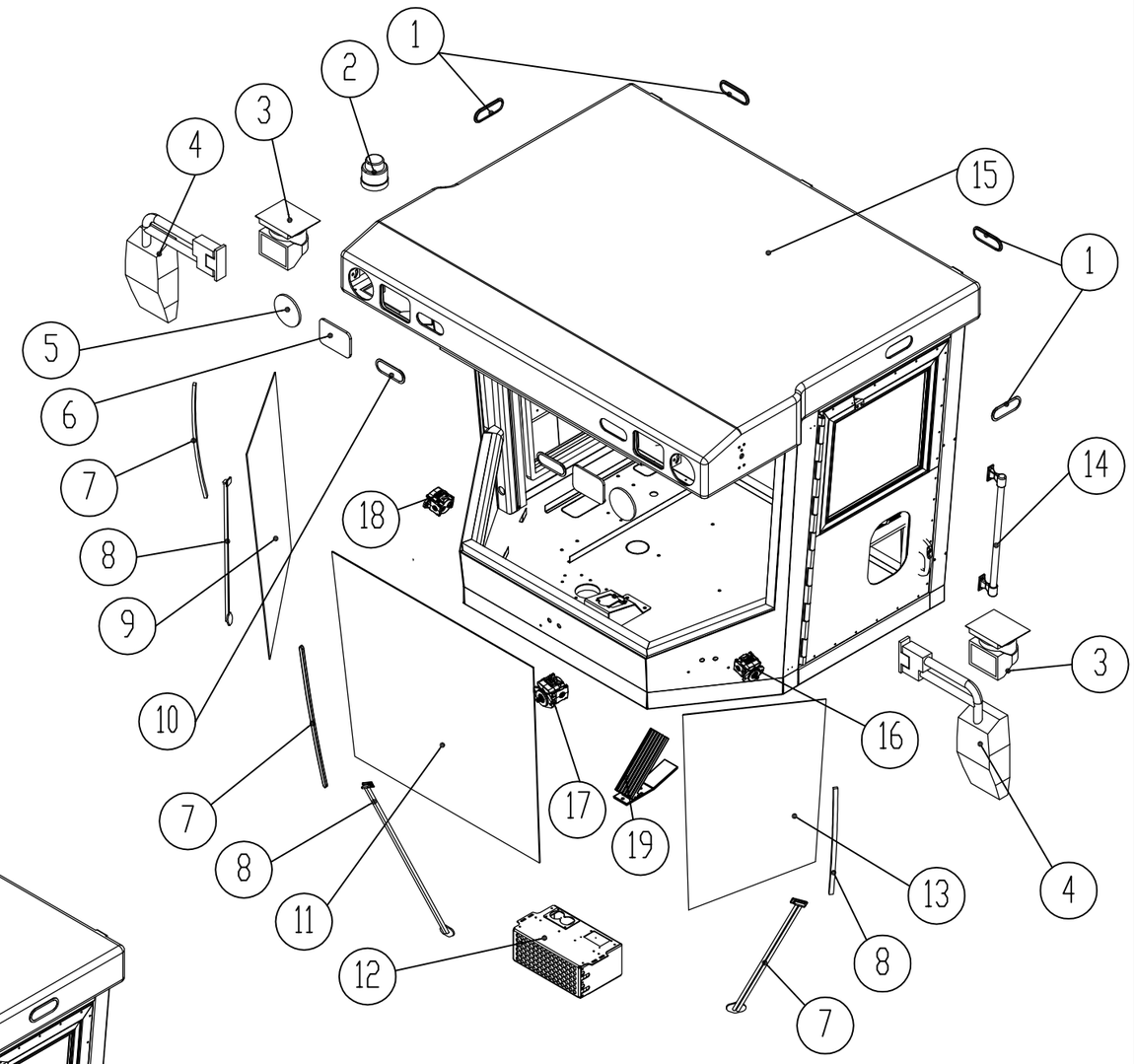
Part Description
Hydraulic Tank Assembly

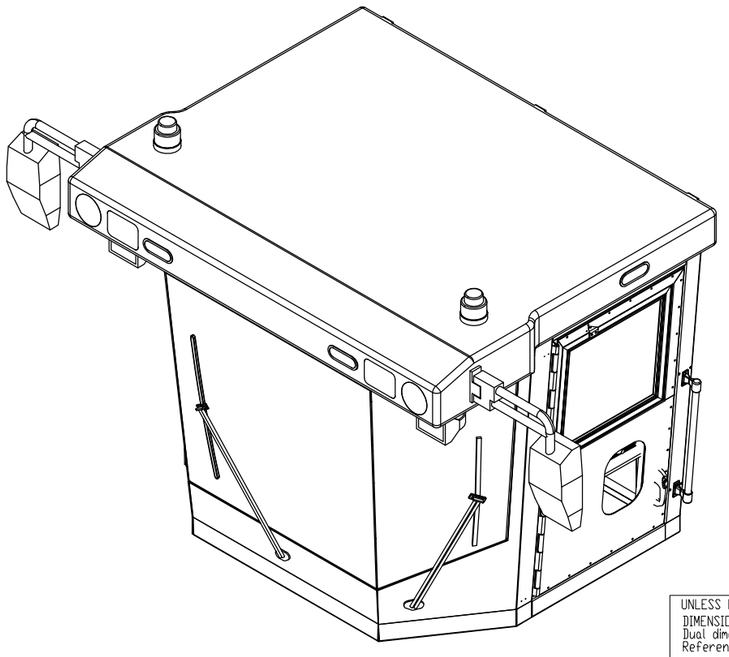
Part Number
550S-0800630

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	LTL1655A	Side-Lamp	4
2	LTL1300	Circular Strobe	2
3	BC-XK013	Beacon	2
4	HY-0169	Rosco Side Mirror	1
5	LML0470	Lamp	2
6	JH20	High&Low Beam Lamp	2
7	136.2265.GA.04	Wiper Blade	3
8	127.3204.GA.D4	Wiper Arm	3
9	RST-K□DIAK001	Right Glass	1
10	LTL1657A	Turning Light	2
11	RST-K□DIAK004	Front Glass	1
12	TY46G15AB-ZGZQ-09	Cab heater/heat exchanger	1
13	RST-K□DIAK002	Left Glass	1
14	550S-1002015	Handrail	2
15	K01649	Cab	1
16	141543730D4	Wiper Motor	1
17	14154363014	Wiper Motor	1
18	14154373014	Wiper Motor	1
19	4613170230	Brake Pedal	1





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KODIAK

MATERIAL

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TOLERANCES:
Fractional± 1/8"
Angular: MACH ±0.5° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

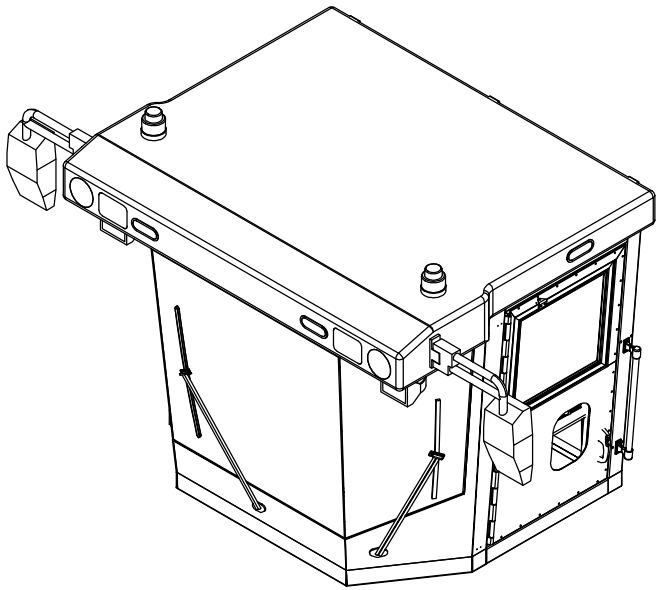
Part Description
Cab Assembly

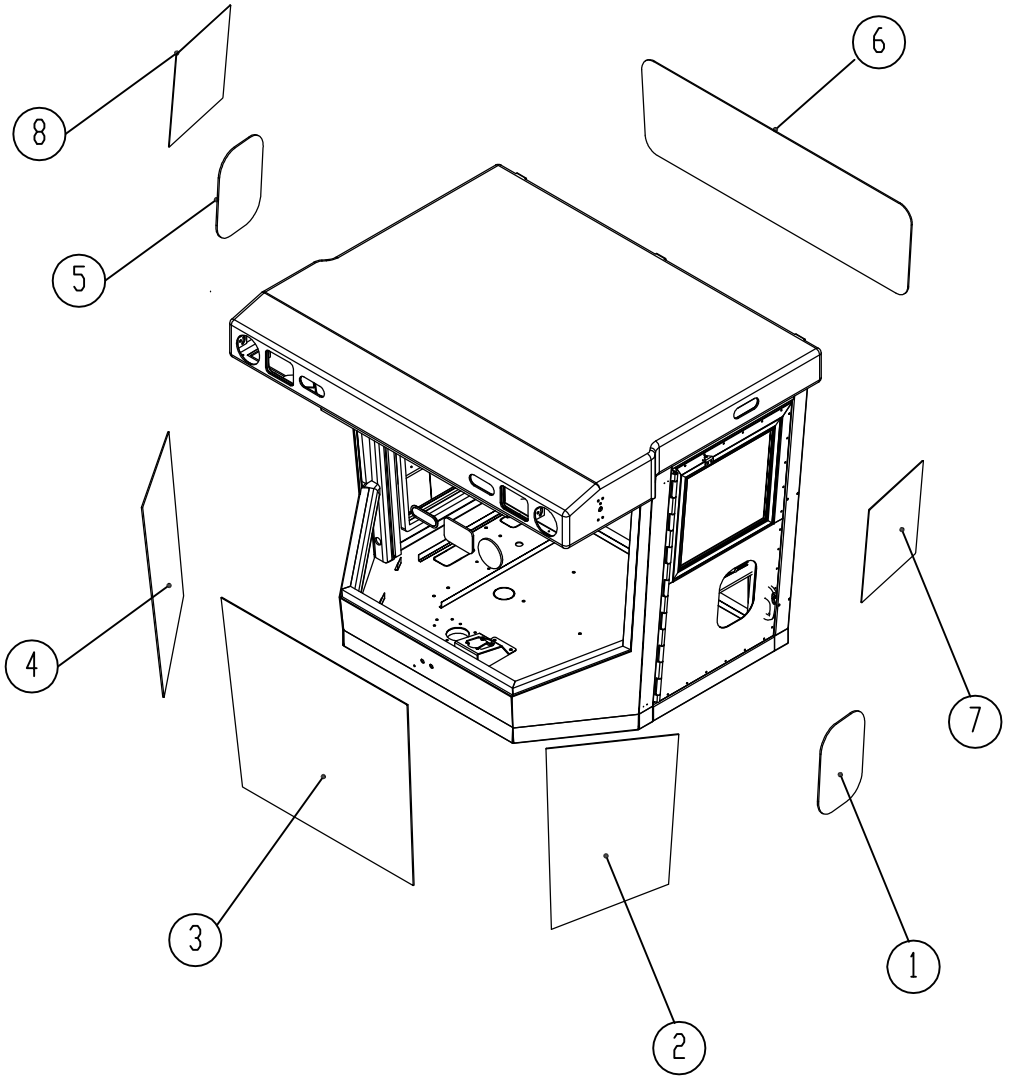
Part Number
K01649

-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	RST-KODIAK006	Left door view glass	1
2	RST-KODIAK002	Left side glass	1
3	RST-KODIAK004	Front glass	1
4	RST-KODIAK001	Right side glass	1
5	RST-KODIAK005	Right door view glass	1
6	RST-KODIAK003	Rear glass	1
7	RST-KODIAK008	Left window glass	1
8	RST-KODIAK007	Right window glass	1





KODIAK

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MATERIAL

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Reference dimensions are in ( )

TOLERANCES:
Fractional: 1/8"
Angular: MACH ±0.5 ° BEND
Machined/Drilled Holes:

All Others
x.x ±0.10
x.xx ±0.06
0.03

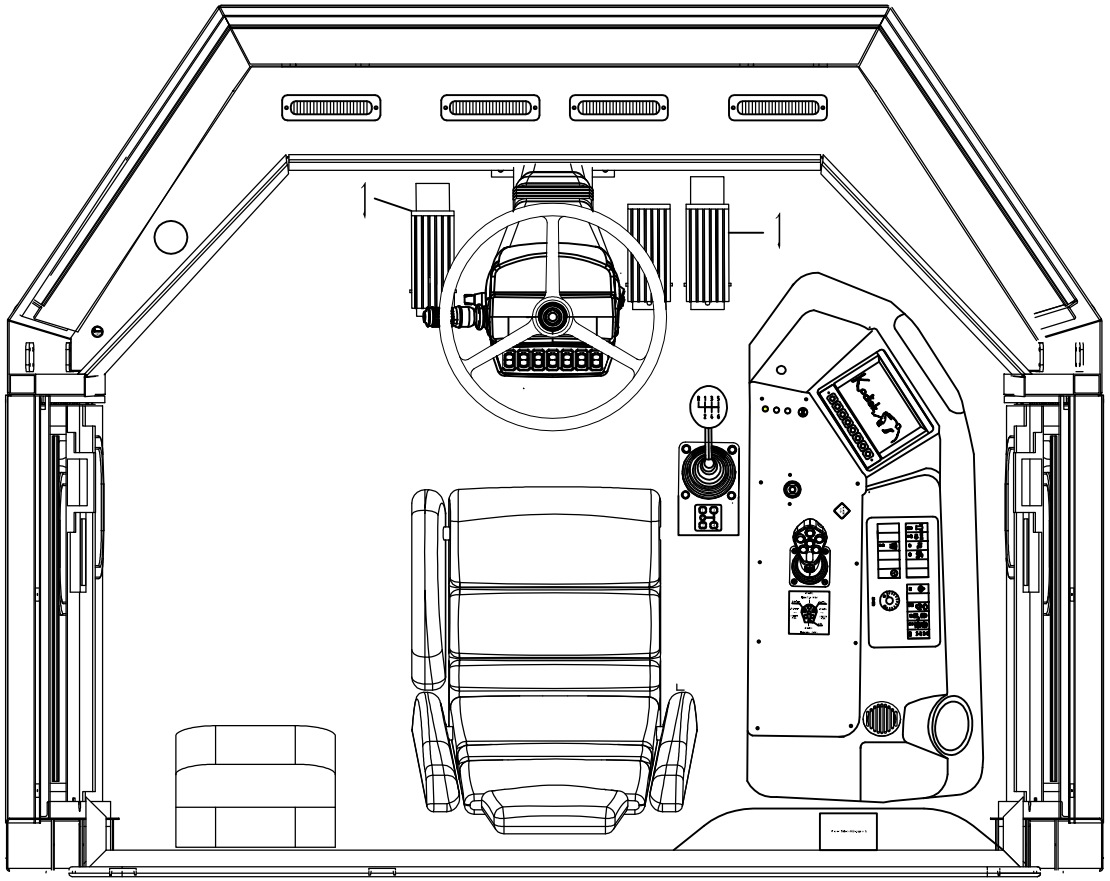
Part Description
Cab Glass Assembly

Part Number
K01649-01

-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity	Note
1	351571	Dual analog accelerator position sensor	2	



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TOLERANCES:
Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

Part Description
CR580S Location of all sensors

Part Number
580S0902001

Revision
–0

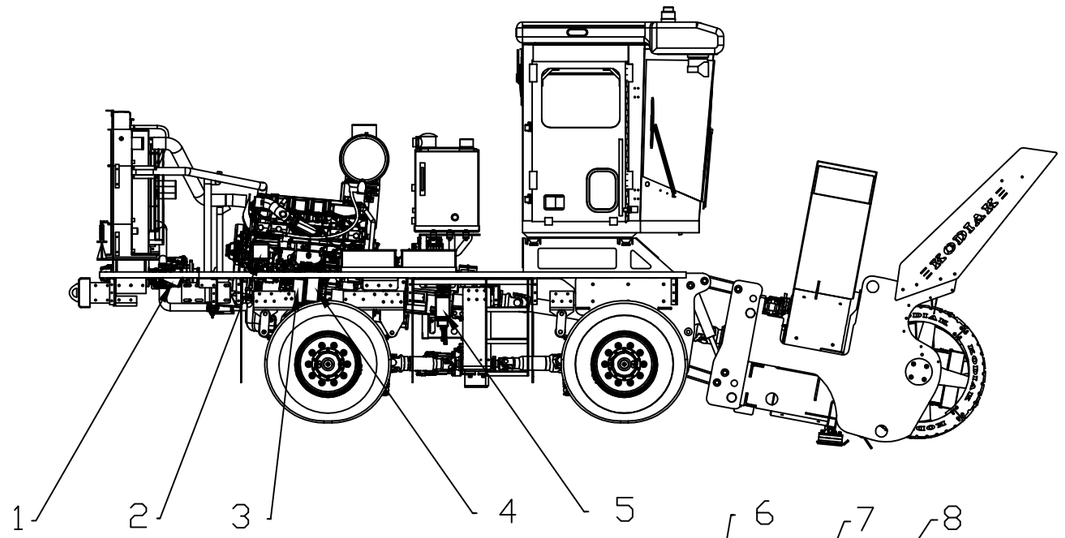
DRAWN BY JND DATE 01/04/2020

SCALE: 3:2

WEIGHT:

SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	0009830643	Drive pump filter element	1
2	4324102412	Air dryer	1
3	FF5687	Secondary fuel filtration	1
4	FS36260	Primary fuel filter	1
5	FS36230	Fuel/Water Separator	1
6	FAX-400X20	Hydraulic oil return filter element	1
7	AF26434	Secondary air filter element	1
8	AA2960	Primary air filter element	1
9	LF9080	Engine oil filter element	1
10	PBE0160F010N	Hydraulic oil filter	1



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional ± 1/8"
Angular: MACH ± 0.5° BEND
Machined/Drilled Holes:

All Others
x.x ± 0.10
x.xx ± 0.06
0.03

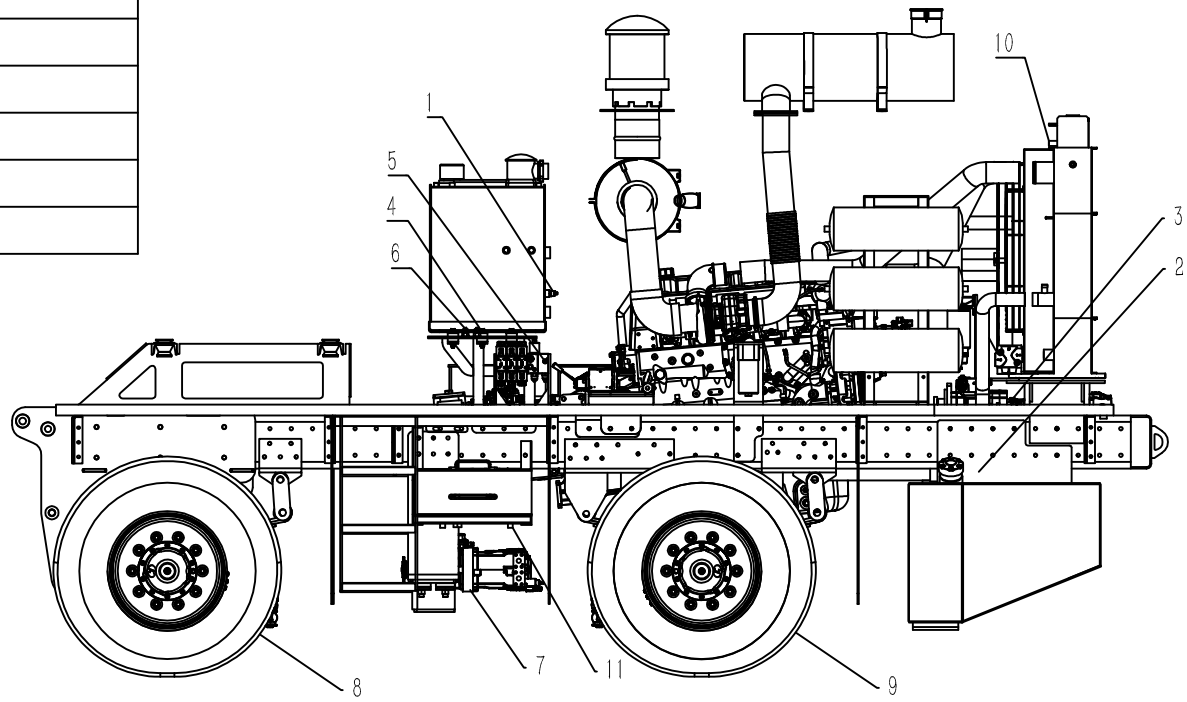
Part Description
Engine filter element

Part Number
CR550S-filter element -1

Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity	Note
1	MBST3560	Hydraulic oil temp	1	
2	JKM05123	Fuel level sensor	1	
3	090G2665	Drive pump pressure sensor	1	
4	41V10H22	Oil circulation pump pressure switch	1	
5	MBS1250	Oil circulation pump sensor	1	
6	090G2138	Air pressure sensor	1	
7	R1	Gearbox speed sensor	1	
8	Vert-X 32E7d836	Front axle position sensor	1	
9	Vert-X 32E7d836	Rear axle position sensor	1	
10	2872769	Engine coolant level sensor	1	
11	5300516	Water in fuel sensor	1	
12				



KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH± 0.5° BEND± 2°
Machined/Drilled Holes: ±0.01

All Others
x.x ±0.10
x.xx ±0.06
x.xxx ±0.03

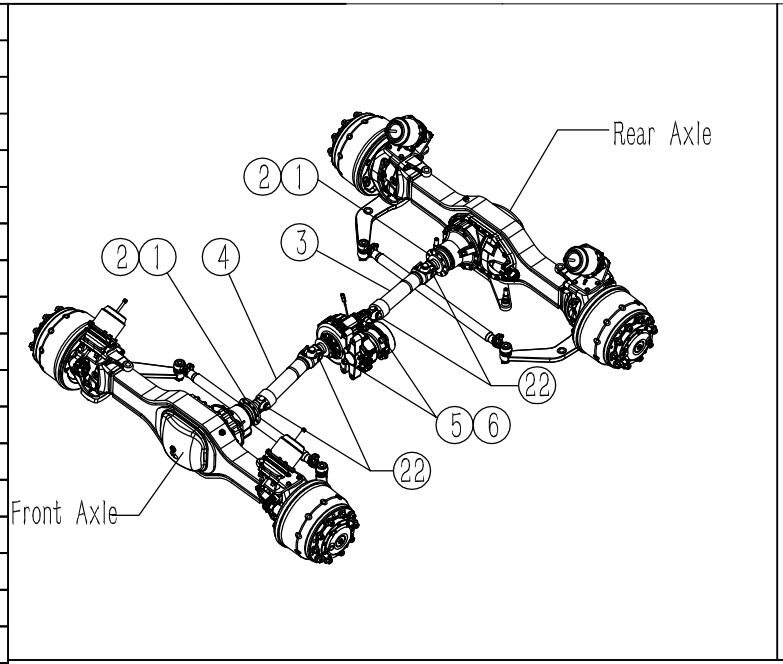
Part Description
CR580S Location of all sensors

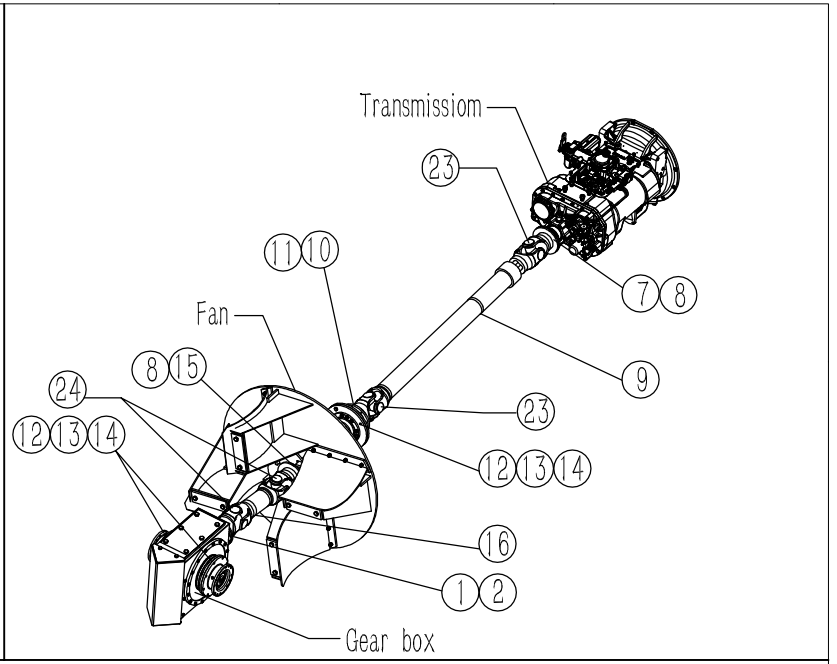
Part Number
580S0902000

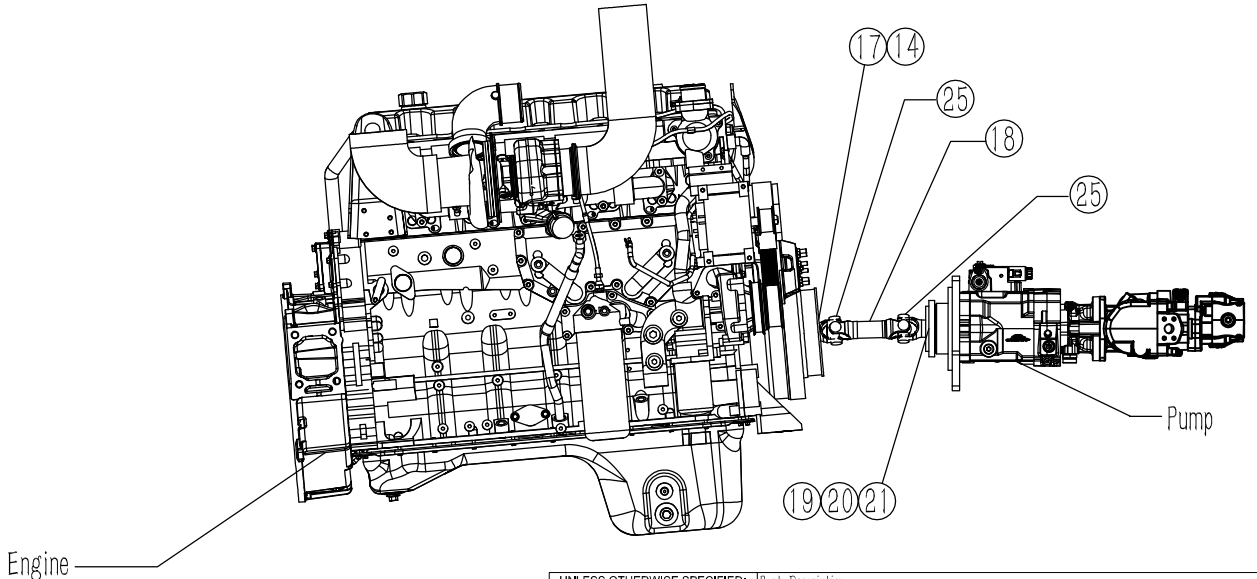
Revision
-0

DRAWN BY JND DATE 01/04/2020 | SCALE: 3:2 | WEIGHT: | SHEET 1 OF 1

Num	Part Num.	Description	Quantity
1	Q150B1645TF3	M16×2×45 Bolt	20
2	Q334B16	M16×2 Lock Nut	20
3	NJ130-730	Driveline	1
4	NJ130-705	Driveline	1
5	Q18501035TF3-P150	M10×1.5×35 Bolt	16
6	Q32310	M10×1.5 Lock Nut	16
7	Q18501470TF30-P150	M14*1.5×70 Bolt	4
8	Q334B14	M14×1.5 Nut	14
9	395-1820	Driveline	1
10	Q18501645TF3	M16*1.5×55 Bolt	8
11	Q32316	M16*1.5 Lock Nut	8
12	K00002	Shear Pin	6
13	Q32312	M12×1.75 Nut	6
14	Q40312	Φ12 Spring Washer	10
15	Q151B1640TF3	M16×1.5×40 Bolt	10
16	0082-650	Driveline	1
17	Q150B1235TF3	M12×1.75×35 Bolt	4
18	113200246	Driveline	1
19	Q151B1435TF3-P150	M14*1.5×35 Bolt	4
20	Q40314	Φ14 Spring Washer	4
21	Φ28*15*4	Φ28 Washer	4
22	Φ35×106	U.J Cross Assy	4
23	Φ57×152	U.J Cross Assy	2
24	Φ57×144	U.J Cross Assy	2
25	NJ131	U.J Cross Assy	2







KODIAK

DRAWING NOT TO SCALE

MATERIAL

ASSEMBLY

UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
Dual dimensions are in mm
Reference dimensions are in ( )

TOLERANCES:
Fractional± 1/8"
Angular: MACH±0.5° BEND
Machined/Drilled Holes:

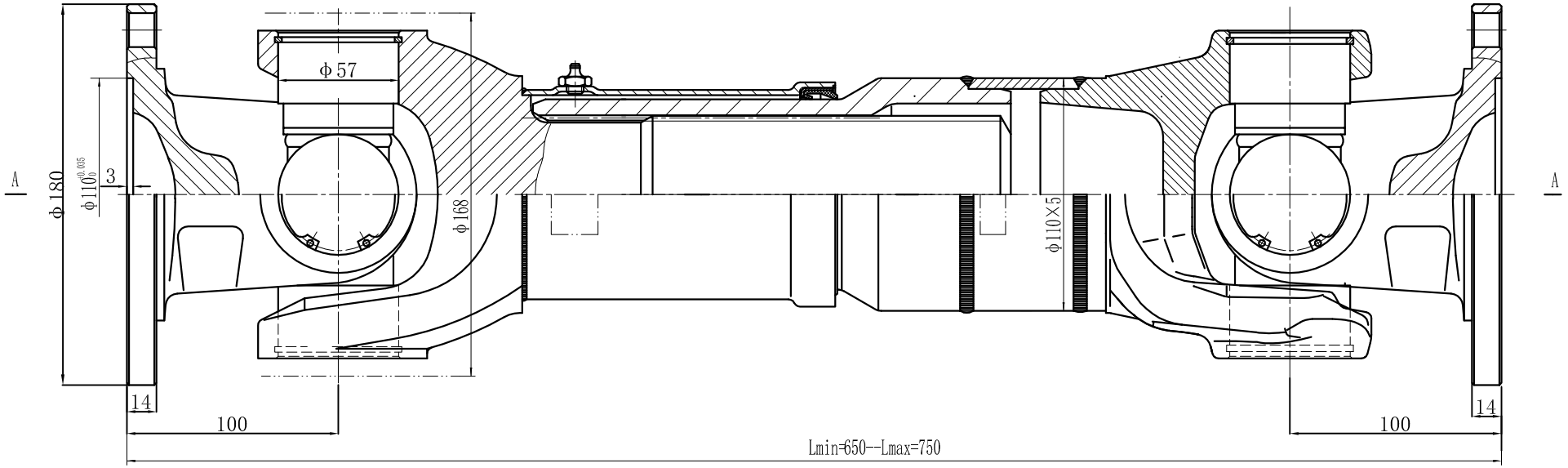
All Others
x.x ±0.10
x.xx ±0.06
0.03

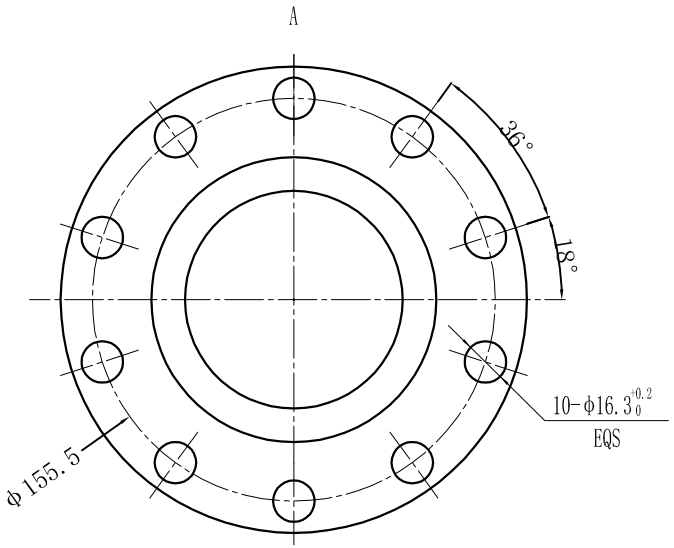
Part Description
Driveline Aseembly

Part Number
550S-0600000

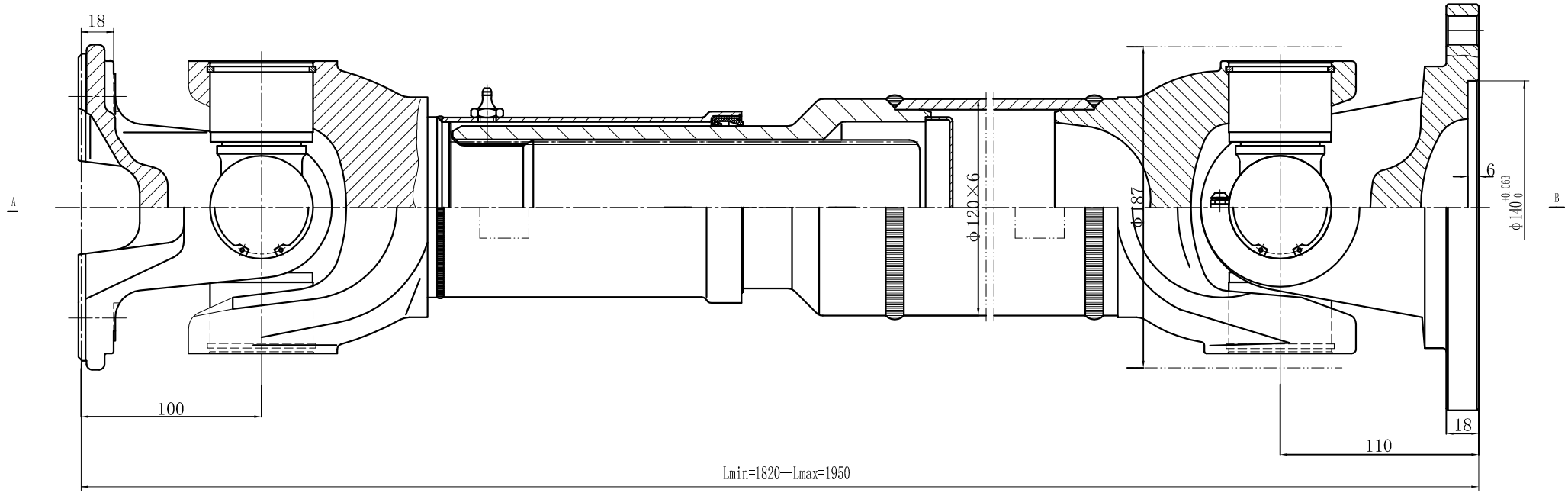
Revision
-0

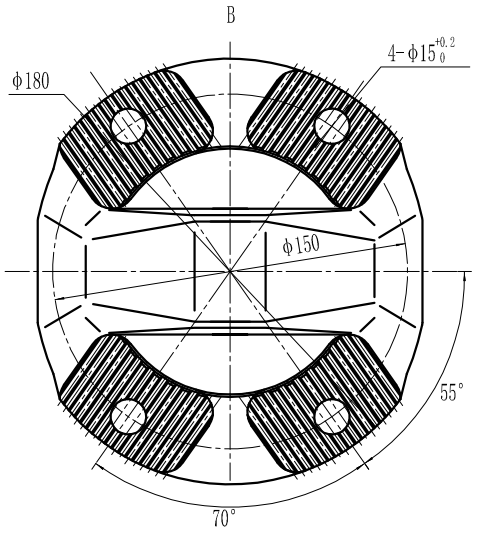
DRAWN BY JND DATE 01/04/2020 | SCALE: 3.2 | WEIGHT: | SHEET 1 OF 1

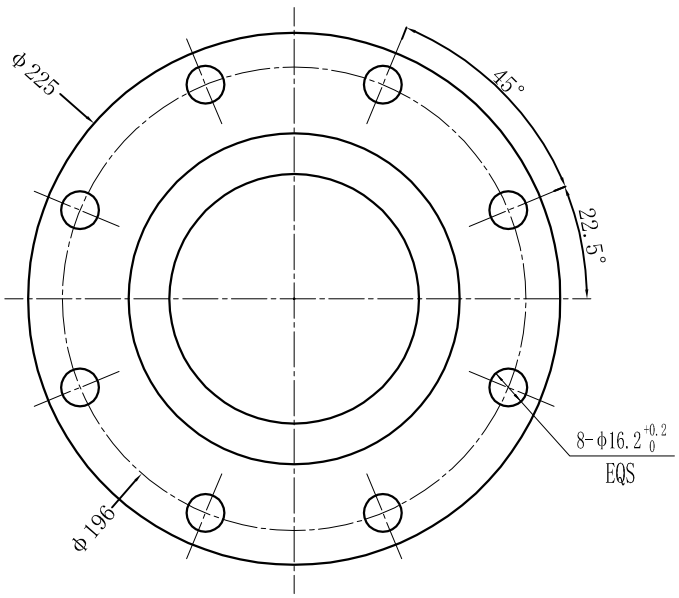




							Driveline	0082-650
								EDITION / WEIGHT / SCALE
MARK	AMD.	CHANGE		SIGN.	DATE.			KG / 1:10
DES.			TECHN.					
APP.			ALLOW.					
CONT.			DATE				SHEET OF	

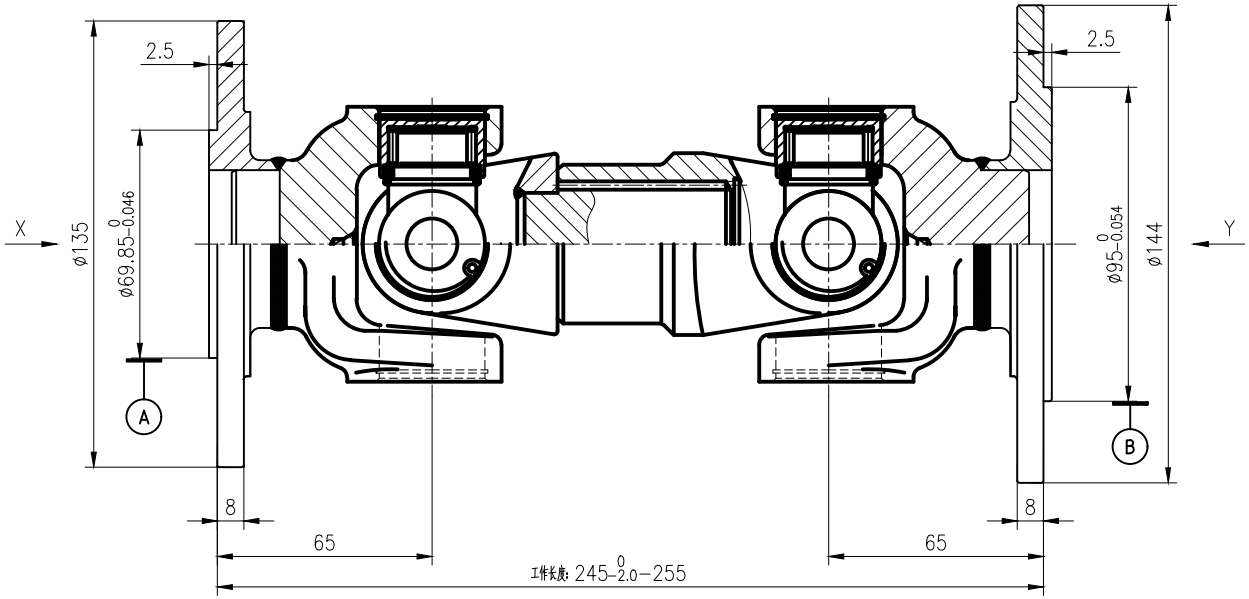


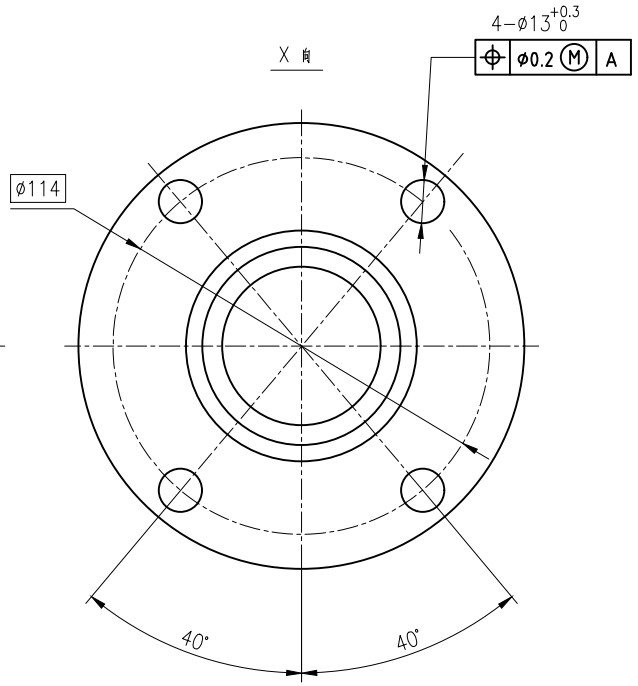


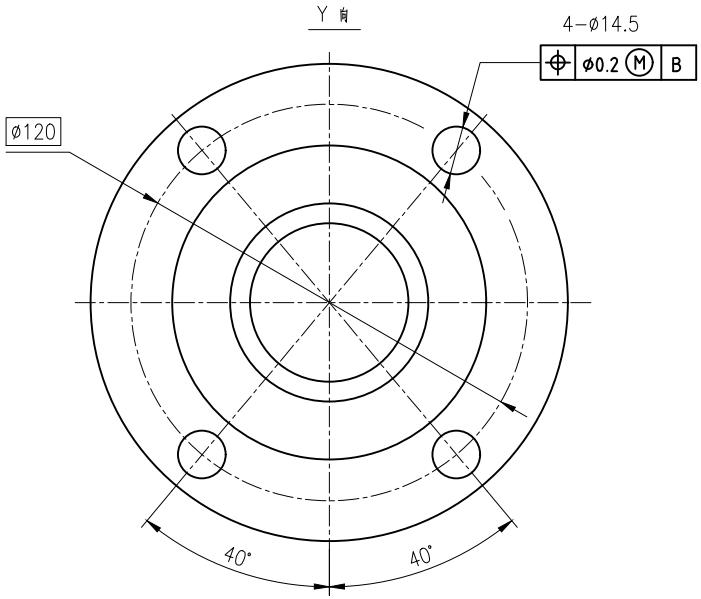


								Driveline	395-1820
MARK.	NO.	CHANGE		SIGN.	DATE				EDITION	WEIGHT	SCALE
DES.			DESIGN.						KG	REVISION
APP.			ILLUM.							
COUNT.			DATE			SHEET/OF				

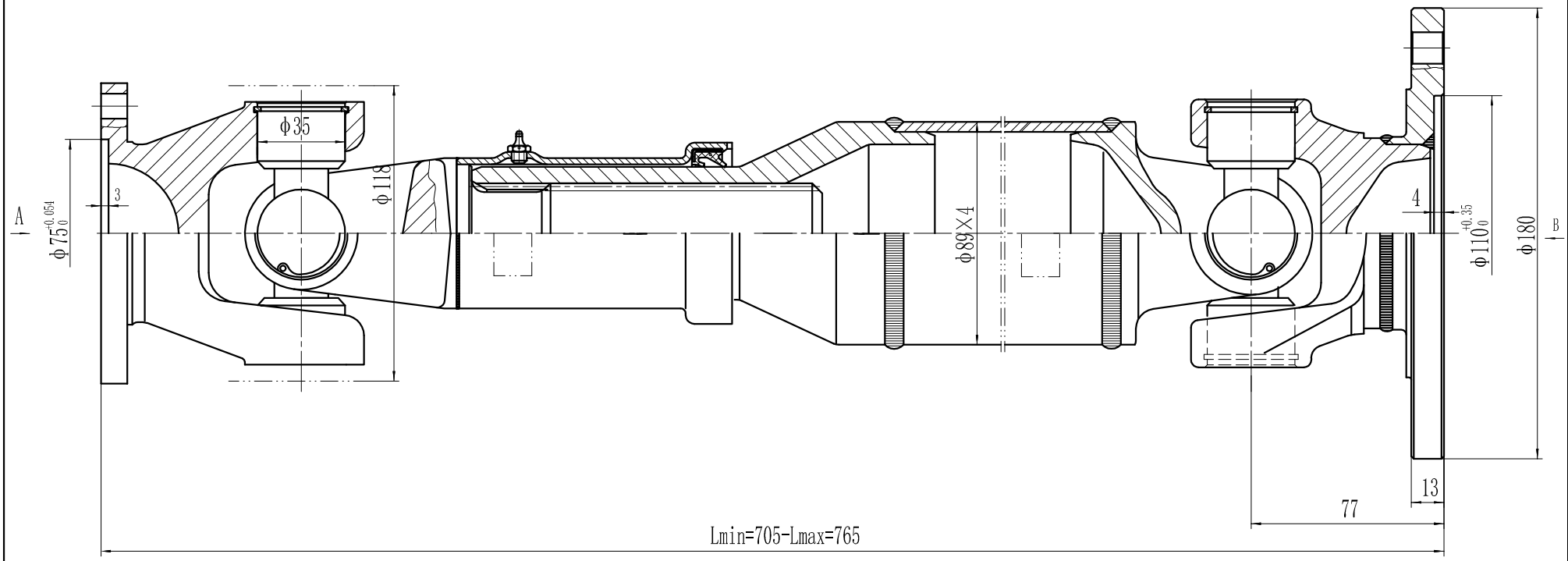
113200246

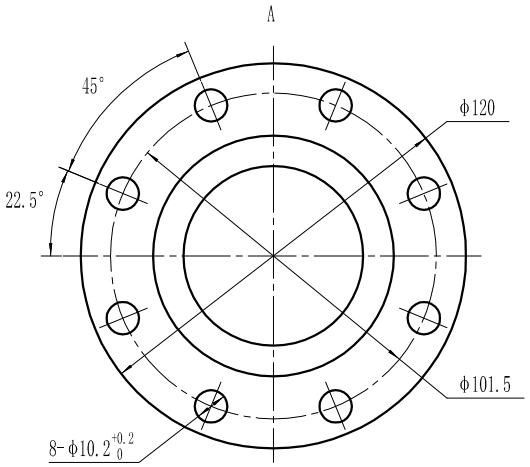


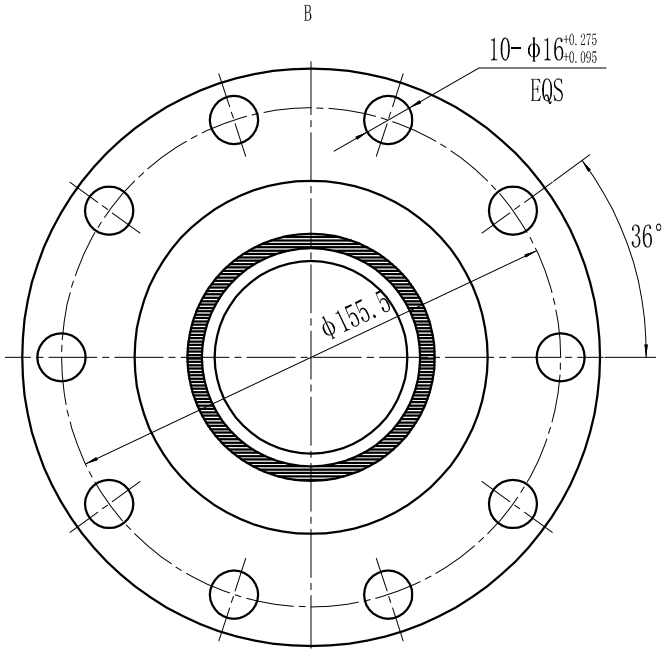




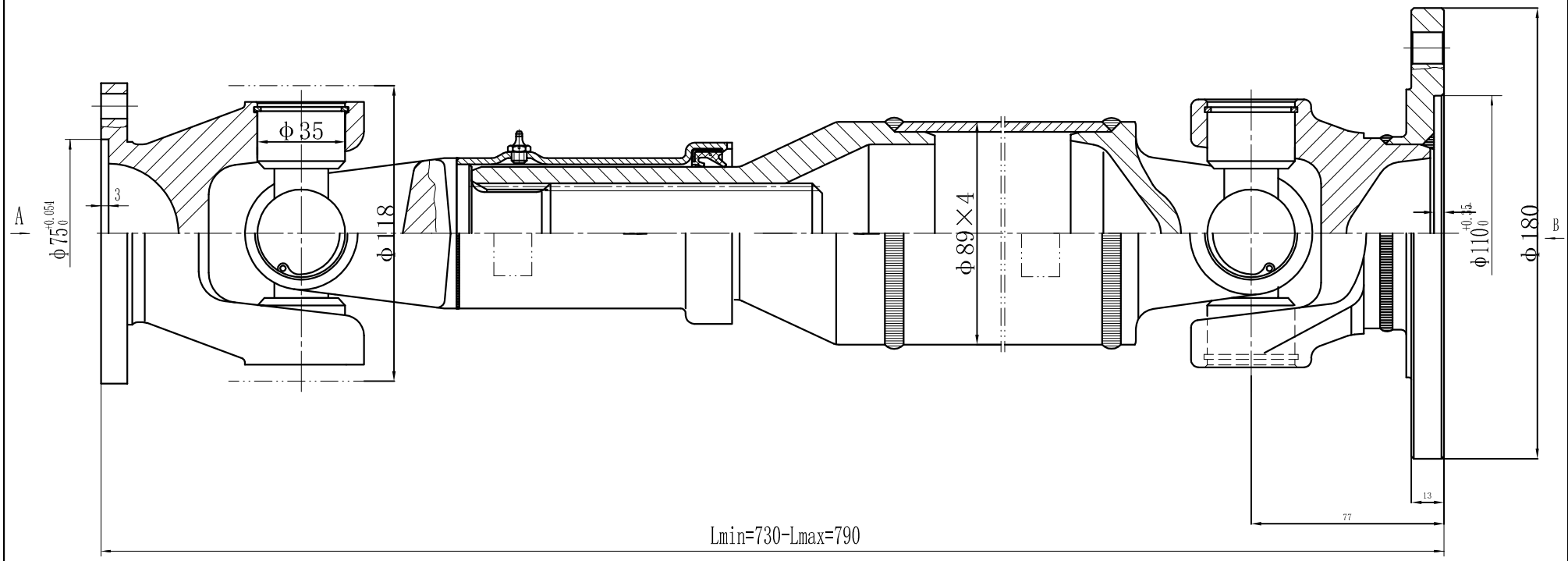
Part number:113200246

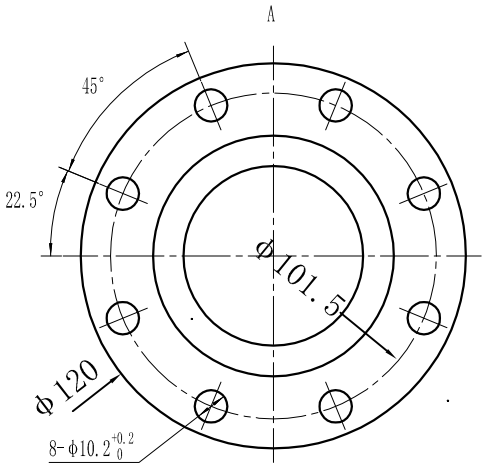


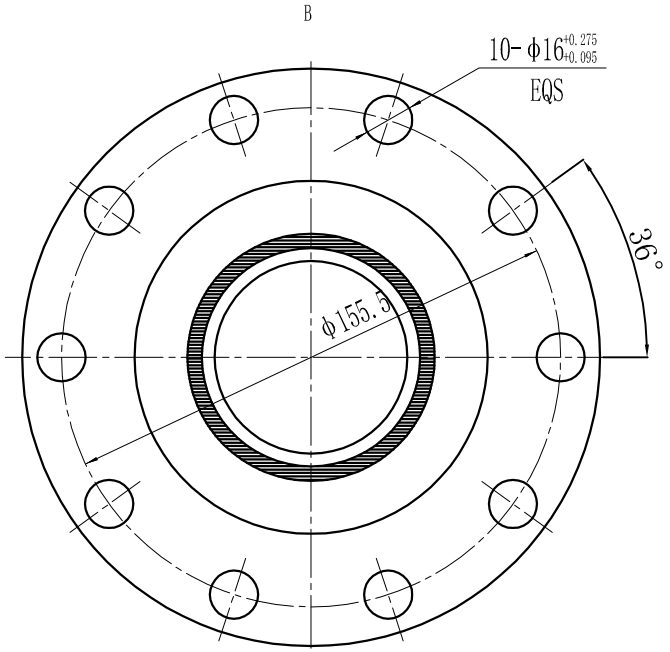




							Driveline	NJ130-705	
								EDITION	WEIGHT / SCALE
MARK	AMO.	CHANGE		SIGN.	DATE			KG	RATIO
DEG.			TECHN.						
APP.			ALLOW.						
COUNT.			DATE				SHEET/OF		







							Driveline	NJ130-730	
								EDITION	WEIGHT / SCALE
MARK	AMO.	CHANGE		SIGN.	DATE				KG / RATIO
DEG.			TECHN.						
APP.			ALLOW.						
COUNT.			DATE				SHEET/OF		

Section 2. List of recommended tools

Allen Drivers

1. Metric Allen wrench set 2-millimeter to 17-millimeter

Socket Drivers

1. Metric (shallow and deep) 5-millimeter to 27-millimeter
2. Short, medium, long extensions
3. Ratchet handle
4. Universal joint
5. Torque wrench
6. Breaker bar

Feeler Gauge Set

1. Set A for exhaust
2. Set B handle for Intake

Electrical tools

1. Multi-meter
    a. Auto ranging
    b. Digital readout
2. Crimping tool
3. Wire stripping tool
4. Wire cutters
5. Handheld torch or flashlight

Pliers

1. Adjustable
2. Needle nose
3. Vise-grip set
4. Adjustable joint
5. Locking
6. Side cutters
7. Slip-joint
8. Snap ring
    a. Small reversible
    b. Large reversible
    c. Flat with 40mm minimum opening
9. Brake spring
10. Battery nut

Pry Bar Set

1. 30cm
2. 60cm

3. 90cm

Screw Drivers

1. Philips
    a. Short, medium, long
2. Flathead
    a. Short, medium, long
3. #1 to #3

Wrenches

1. Metric, 8-millimeter to 22-millimeter
2. Adjustable wrench
    a. Small, medium, large
3. Filter wrench

Section 3. Warranty Procedure

For Kodiak to provide warranty parts, 8 items must be submitted to determine if the equipment failure was due to improper maintenance, operator error or warranty. The following must be submitted with each request.

1. Serial number of the machine
2. Location of the machine
3. Hours on the machine (can be obtained on the monitor
4. Nature of the failure
5. Pictures of the failure
6. Contact person to discuss what happened
7. Name of the individual operation the machine
8. Name of person who maintained or inspected the machine prior to operation