

# XT560G TRACTOR

## OPERATION, MAINTENANCE AND PARTS MANUAL



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## **APPLICABILITY OF THIS MANUAL**

XT560G Tractors with a Manufacture Year of 2024 (MY2024) with Serial Numbers (SN224082044+).

If this manual does not correspond to the Manufacture Year (MY) of your Tractor, the correct manual can be obtained from AvroGSE using the contact details given inside the Front Cover of this manual.

Manual Part Number: PRPW03310

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## LIST OF ABBREVIATIONS

A	Amp (Ampere)	LED	light emitting diode
C	Centigrade	Max	maximum
cc	cubic centimetres	MIL	Malfunction Indicator Lamp
c/w	complete with	mm	millimetres
DBP	Draw bar Pull	MPa	Megapascal (1 MPa = 1 Nmm <sup>2</sup> = 145 lbs/in <sup>2</sup> )
Deg	degree (temperature)	mph	miles per hour
Dia.	diameter	MY	manufacture year
D.T.C.	Diagnostic Trouble Code	N/A	Not Applicable
F	Fahrenheit	Nm	Newton Metre
ft/lbs	foot-pounds force	o.d.	outside diameter
GSE	ground support equipment	P/N	Part Number
kg	kilograms	PPE	Personal Protective Equipment
IATA	International Air Transport Association	psi	pounds per square inch (pressure)
i.d.	inside diameter	SAE	Society of Automotive Engineers (specification)
in.	Inches	SWL	Safe Working Load
kph	kilometres per hour	Temp	temperature
L	litre	Turbo	turbocharger
lbs	pounds		

## **SAFETY**

Observe the following safety precautions.

### **LETHAL DANGER – CARGO USE ONLY**



The Tractor is designed to tow airport ground support equipment only. Do not exceed the Tractors' towing capacity. It is dangerous to do so and an accident or damage to the Tractor may result.

**DO NOT** allow people to ride on the ground support equipment while it is being towed. It is unsafe to do so, and lethal injury may result.

### **LETHAL DANGER – DO NOT USE ON PUBLIC ROADS**



The Tractor is designed for use in airports. It is **NOT** suitable, or legal, for use on public roads. Attempting to use the Tractor on a public road may result in a lethal accident.

**DO NOT** use the Tractor for purposes for which it was not designed, or operate the Tractor in a reckless manner. Lethal injury may result.

### **LETHAL DANGER – DO NOT ALTER FACTORY SETTINGS**



**DO NOT** attempt to alter the Tractor's factory settings. Lethal injury may result. The factory settings optimise both the safety of the Tractor and the Tractor's towing performance.

Altering the factory settings invalidates the Warranty on the Tractor.

### **WARNING – PETROLEUM – FIRE AND HEALTH HAZARD**



Fuel expands when heated. Expanding fuel in an over full tank can cause spills and leaks. Do not overfill the fuel tank.

Do not eat, drink or smoke when refuelling the Tractor. If fuel is ingested, or comes into contact with your eyes, nose or mouth, seek medical assistance immediately.

Fuel spillages are a fire and slip hazard. Always clean up any spillages.



## WARNING – BURN HAZARD



Hot water in the radiator will scald. Make sure that the engine has cooled down before removing the radiator cap. Wear Personal Protective Equipment (PPE) including eye shields or protective goggles, and suitable protective gloves.

## WARNING – MAXIMUM SPEED



The maximum speed of the Tractor is limited to 24 kph (14 mph). It unsafe to exceed that speed.

Do not attempt to modify the Tractor to exceed that speed. A fatal accident may result.

## WARNING – ALCOHOL AND DRUG USE



The Tractor must not be accessed or operated by anyone impaired by alcohol or drugs.

## WARNING – SIZE AND WEIGHT OF TRACTOR



The Tractor weighs 4300 kg (9480 lbs). When lifting the Tractor for service and maintenance purposes, always use an Automotive Service Lift/Hoist with a Safe Working Load (SWL) rated above the weight of the Tractor. DO NOT use a crane with lifting slings or chains, there are no lifting points on the Tractor.

## WARNING – SIZE AND WEIGHT OF TRACTOR



When lifting the Tractor during shipping, always use a forklift truck with a Safe Working Load (SWL) greater than 4500 kg (4.5 Tons). DO NOT use a crane with lifting slings or chains, there are no lifting points on the Tractor.

The Tractor must always be towed or moved using a suitable vehicle.

## WARNING – HEAVY ITEMS



Always use correct manual handling techniques. For items positioned below mid-lower leg height, safe lifting capacity is 10 kg (5 kg if not close to your feet) for an able-bodied man and 7kg (3 kg if not close to your feet) for an able-bodied woman.

## WARNING – PETROLEUM, OILS AND LUBRICANTS



Do not eat, drink or smoke when applying oil or lubricant. Do not allow the lubricant to come into contact with your eyes, mouth or nose. Wear Personal Protective Equipment (PPE), for example suitable gloves, eye shields, and overalls. If lubricant is ingested, or comes into contact with your eyes, seek medical assistance immediately.

Oil and lubricants are a slip hazard. Always clean up any spillages, or excess oil or lubricant.

## PRECAUTION – PERSONAL PROTECTIVE EQUIPMENT



When operating, moving, lifting, servicing, repairing, or transporting the Tractor, always wear suitable Personal Protective Equipment (PPE) to prevent crushing of hands, feet, or other body parts. For example, wear protective footwear, safety glasses, hard hat, protective gloves, and high-visibility clothing.

When preparing the Tractor for transport by air, road, or rail, make sure it is securely packed. Safeguard the Tractor against movement or break-away during transport by applying the brake, and securely strapping the Tractor in place.

## PRECAUTION - READ THIS MANUAL



Read and understand this manual before operating, cleaning, repairing, or servicing the Tractor.

A copy of this manual will have been provided with each Tractor when it was delivered.

Familiarize yourself with the location and correct use of all controls, indicators, and safety devices before operating the Tractor.

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## PRECAUTION – OPERATOR TRAINING



**ONLY** people who have been **FULLY TRAINED AND AUTHORIZED** to operate this type of Tractor are permitted to start, operate, and shut down the Tractor.

Anyone operating or maintaining the Tractor must understand the potential risks and hazards associated with it **BEFORE** they operate the Tractor.

Anyone operating or maintaining the Tractor must be familiar with all the required safety devices and procedures.

## PRECAUTION – SAFE WORKING PRACTICES



Be aware of the Tractor's working parts. Keep hands, feet, and loose clothing away from the Tractor's moving parts.

**DO NOT** operate a Tractor that is need of repair. Perform scheduled maintenance in accordance with the maintenance procedures given in this manual.

Only operate the Tractor when:

- (1) All safety devices and guards are in place and in full working order.
- (2) All controls, gauges, lights, and indicators operate correctly.
- (3) The Tractor is set-up correctly in accordance with this manual.

## INTRODUCTION

The function of the XT560G Tractor is to act as a baggage tractor, towing aircraft ground support equipment (GSE) within the confines of airports. The Tractor is NOT suitable for use on public roads. Multiple GSE can be linked together for towing, up to the towing limit of the Tractor and the regulation limits of the relevant airport/transport authorities.



**Figure 1 – XT560G Tractor**

The Tractor can tow the following types of GSE:

- Cargo Dolly's.
- Baggage Carts.
- Trash Carts.
- Water Service Carts.
- Fuel Carts.
- Lavatory Service carts.
- Gas Bottle Service Carts.

A hitch at the rear allows multiple carts to be linked together. A hitch at the front allows the Tractor to tow carts while reversing.

## SPECIFICATION

The specification of the XT560G Tractor is given in the following Table.

**Table 1. XT560G Tractor specification**

XT560G Tractor	Value	Units	Notes
Dimensions			
Length (overall)	3200 125.9	mm in.	Includes towing couplers
Width	1440 56.7	mm in.	
Height (without cab)	1450 57.0	mm in.	
Height (including cab)	2000 78.7	mm in.	
Wheelbase	1600 63.0	mm in.	
Minimum Ground Clearance	150 6.0	mm in.	
Towing Coupler height	405/304.8 15.9/12	mm in.	
Weight	4250 9389	kg lbs	
Max Speed (unloaded)	17 28	mph kph	Max speed is governed.
Max Speed (loaded)	7 12	mph kph	
Draw Bar Pull (DBP)	5620	lbs	Max value



XT560G Tractor

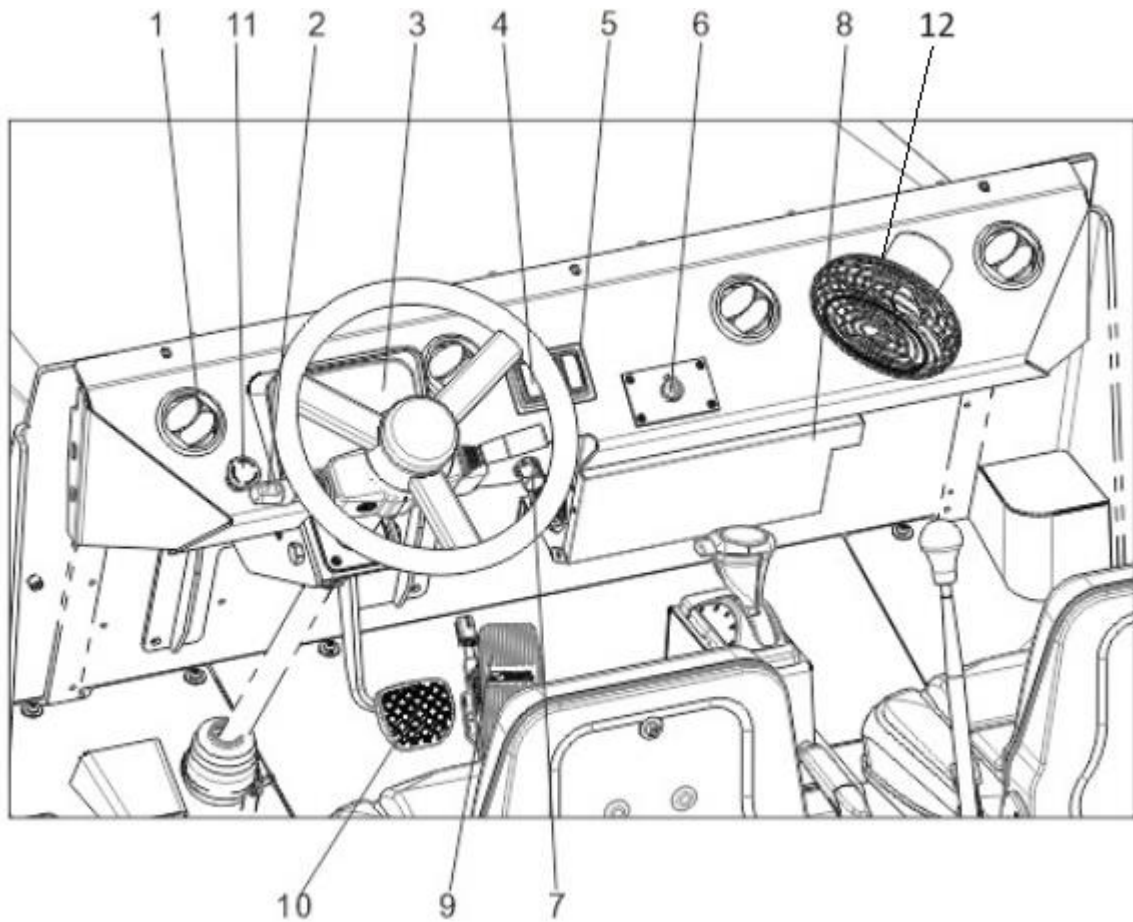
XT560G Tractor	Value	Units	Notes
Minimum Turning Radius	2950 116	mm in.	XT560G has hydraulic power steering.
Engine type	Gasoline		PSI 2.4 Engine
Engine Displacement	2351	cc	
Gears	Forward: 2 Reverse: 1		
Operating temperature range (with Cab)	-30 to +50 -22 to +122	deg C deg F	Ambient temperature
Storage temperature range (with Cab)	-30 to +50 -22 to +122	deg C deg F	Ambient temperature Storage indoors recommended
Operating temperature range (without Cab)	-20 to +50 -4 to +122	deg C deg F	Ambient temperature
Storage temperature range (without Cab)	-30 to +50 -22 to +122	deg C deg F	Ambient temperature Storage indoors recommended
Humidity range	0 to 100	%	Relative humidity
Tire pressure	70 4.83	psi Bar (gauge)	Front tires
	90 6.21	psi Bar (gauge)	Rear tires

## DESCRIPTION



- |   |                         |   |                       |
|---|-------------------------|---|-----------------------|
| 1 | Windshield wiper        | 6 | Side Door Lower Glass |
| 2 | Warning Beacon          | 7 | Indicator Lights      |
| 3 | Side Rear Glass         | 8 | LED Headlights        |
| 4 | Wing (side View) Mirror | 9 | Front Coupler         |
| 5 | Door Handle             |   |                       |

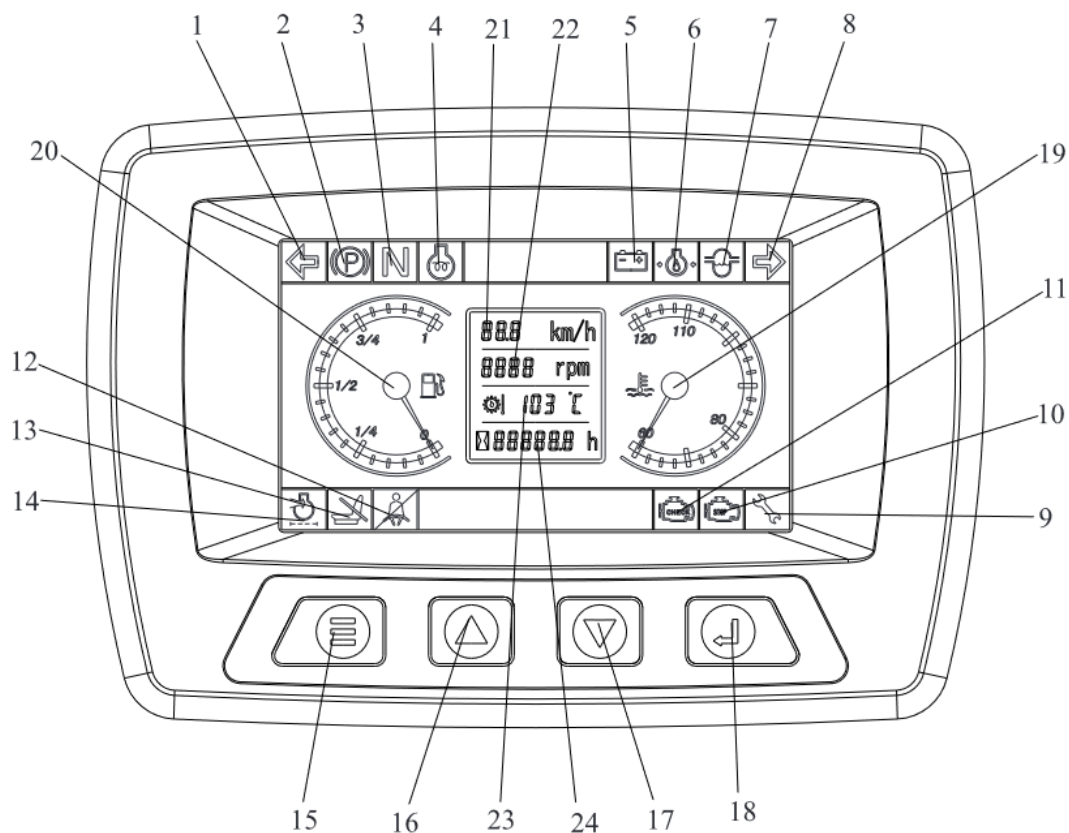
**Figure 2 – XT560G Tractor exterior**



- |   |                               |    |                       |
|---|-------------------------------|----|-----------------------|
| 1 | Heater vent                   | 7  | Start/Ignition switch |
| 2 | Turn Signal/Headlamp control  | 8  | Heater                |
| 3 | Dash Display Screen           | 9  | Accelerator pedal     |
| 4 | Switch for Rear Working Light | 10 | Brake pedal           |
| 5 | Windscreen Wiper Switch       | 11 | EMERGENCY STOP switch |
| 6 | Heater rotary switch/control  | 12 | Fan                   |

**Figure 3 –Driving controls**





1	Turn left	13	Seat lock indicator
2	Hand brake lamp	14	Air filter alarm light
3	Neutral instructions	15	Menu button
4	Preheat instructions	16	Page up button
5	Charging instructions	17	Page down button
6	Oil pressure low alarm	18	Carriage-return button
7	Oil-water separation	19	Water temp
8	Turn right	20	Fuel meter
9	Maintenance indicator	21	Vehicle speedometer
10	Engine stop indicator	22	Engine tachometer
11	Engine malfunction indicator	23	Oil temp
12	Seatbelt light	24	Chronograph

### Figure 4 – Dash Display Screen (Instrument Panel)

The digital display provides the following:

- Speed (in kph).
- Engine speed (in rpm).
- Oil temperature, with high Transmission oil temperature indicator.
- Operational hours meter.

The Tractor control system includes a series of settings that are pre-set at the factory. These factory settings optimise the towing performance and safety of the Tractor. **DO NOT** attempt to alter the factory settings.

The menu button (17) allows access to a series of menus that are used to set-up the Tractor. If the menu button is pressed, or accidentally tripped, further progress is blocked by a password. **DO NOT** attempt to proceed further. Press the Menu Item Select button (14) to exit the menus.

## LETHAL DANGER – DO NOT ALTER FACTORY SETTINGS

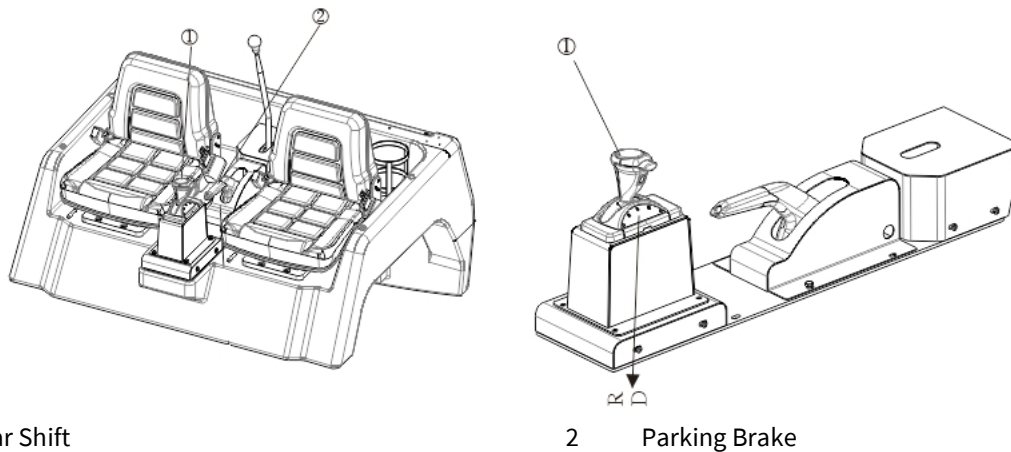


**DO NOT attempt to alter the Tractor’s factory settings. Lethal injury may result. The factory settings optimise both the safety of the Tractor and the Tractor’s towing performance.**

**Altering the factory settings invalidates the Warranty on the Tractor.**

On the Dash Display Screen, the Fault Code Display area (16) is normally “Running Well”. In the event of a fault or malfunction on the tractor it will sometimes (but not always) display a fault code that can be used to identify the problem. Illumination of the MIL Fault indicator (11) also indicates a fault on the Tractor.

### GEAR SHIFT AND PARKING BRAKE

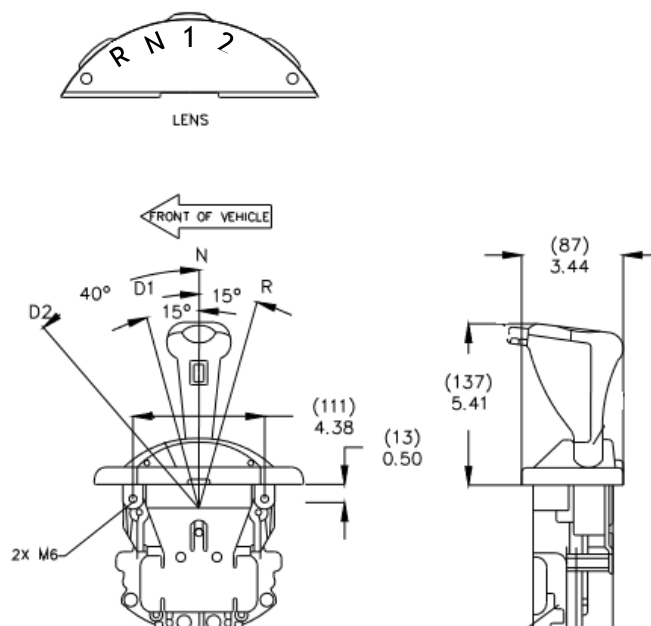


1 Gear Shift

2 Parking Brake

**Figure 5 – Gear Shift and Parking Brake**

GEAR SHIFT



**Figure 6 - Gear Shift**

The Gear Shift has four positions:

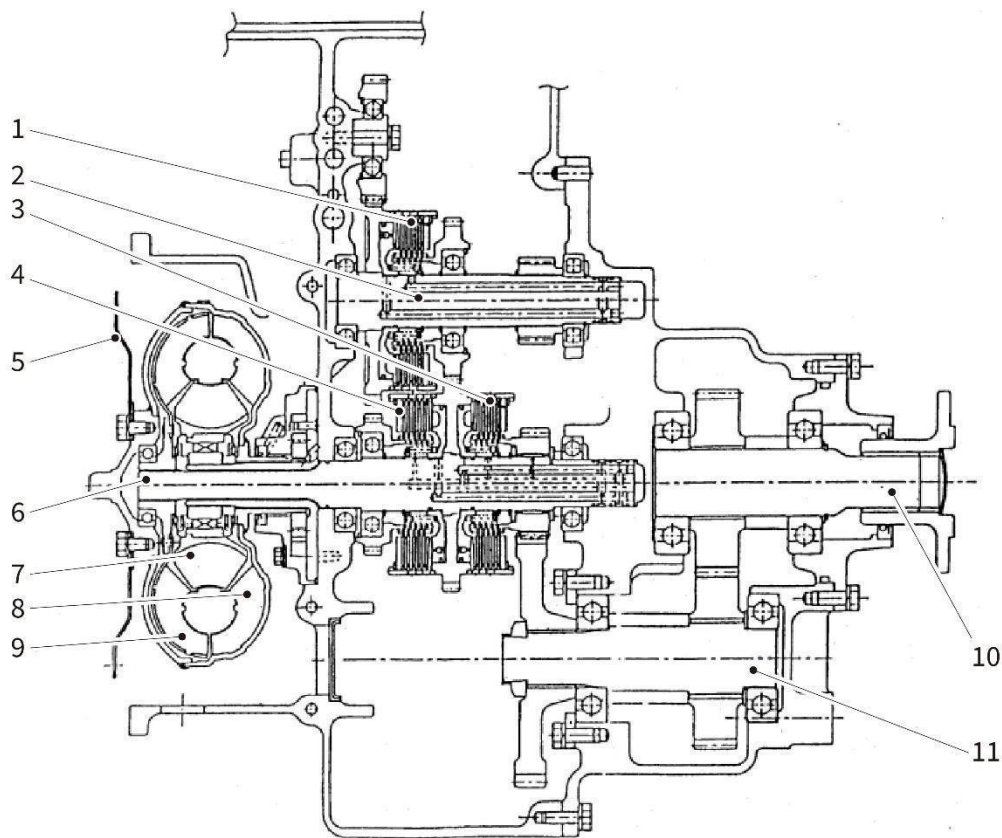
Shift Position	Gear
<b>R</b>	Reverse gear.
<b>N</b>	Neutral position.
<b>1</b>	Forward, Low Speed gear. Use this gear when maximum towing force is required, and when the Tractor is on a down gradient. This gear provides maximum torque.
<b>2</b>	Forward, High Speed gear. This gear should normally be selected for forward travel on level ground. The Gear Shift may be changed between - and + freely.

# FUNCTIONAL DESCRIPTION OF MAIN AUTOMOTIVE ASSEMBLIES

## ENGINE

For the description and technical details of the engine, refer to the Power Solutions International “4G Mobile Diagnostics Manual” and “2.0 & 2.4L Service Manual” that accompany this manual for the XT560G Tractor.

## AUTOMATIC TRANSMISSION



- |   |                       |    |                 |
|---|-----------------------|----|-----------------|
| 1 | Reverse clutch        | 7  | Impeller stator |
| 2 | Reverse shaft         | 8  | Pump wheel      |
| 3 | Second forward clutch | 9  | Turbine         |
| 4 | First forward clutch  | 10 | Output shaft    |
| 5 | Connecting plate      | 11 | Countershaft    |
| 6 | Input shaft           |    |                 |

**Figure 8 - Automatic Transmission – cross sectional view**

The Tractor is fitted with a 2-speed A/T, symmetrical, 3-element, 1-stage, 2-phase, Torque Converter. It possesses the advantages of being easy to operate and good performance; it's maximum efficiency can reach 92%.

The Automatic Transmission is easy to operate and provides good performance. The Transmission type is two-speed forward and one-speed reverse, constant-mesh, and is controlled by a pressure regulating valve and a magnetic valve. The clutch is of the wetted multi-disc type. The oil pump is an interior meshing involute gear pump.

#### DRIVE SHAFT

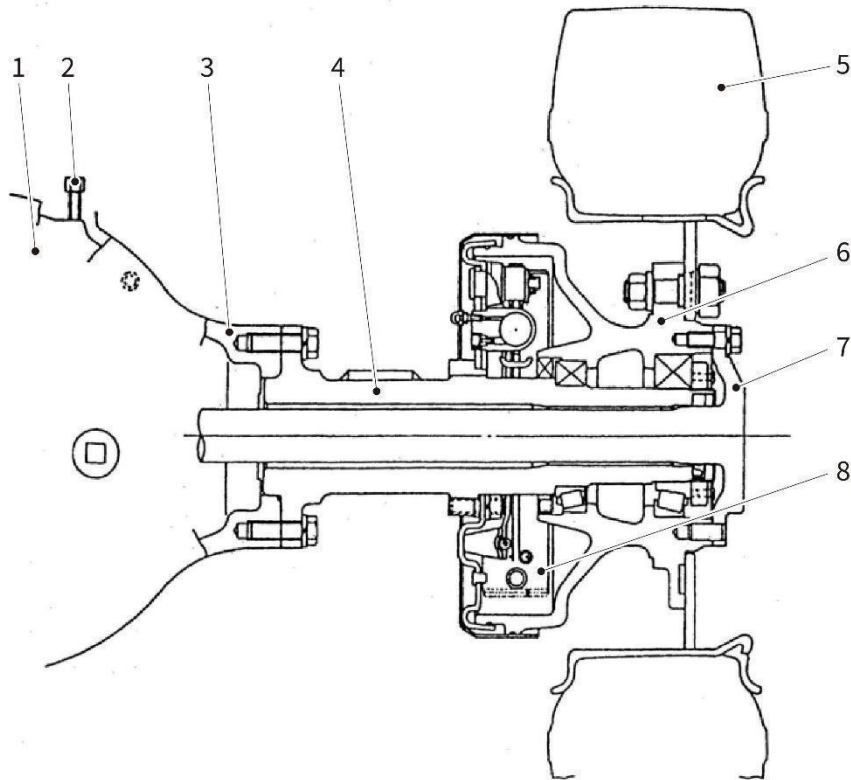
The Drive Shaft is a double cross-spindle stiff type Cardan propeller shaft. It is comprised of:

- A universal flanged fork.
- A universal joint fork.
- A universal joint cross-spindle.

When the clearance between the universal-joint shaft and the needle bearing is excessive, usually because of wear, either the universal-joint shaft or the needle bearing **MUST** be replaced. **DO NOT** lubricate the needle bearing with thick oil. Apply lubrication to the Drive Shaft more frequently when the Tractor is operating in dusty/sandy environments.

### DRIVE AXLE

The structure and main components of the Drive Axle are shown in Figure 9, below.



- |   |                                    |   |                     |
|---|------------------------------------|---|---------------------|
| 1 | Drive Unit Assembly - Differential | 5 | Drive wheel         |
| 2 | Vent screw plug - breather         | 6 | Wheel hub           |
| 3 | Axle housing                       | 7 | Drive shaft         |
| 4 | Axle tube                          | 8 | Rear Brake Assembly |

**Figure 9 - Drive Axle**

## BRAKE SYSTEM

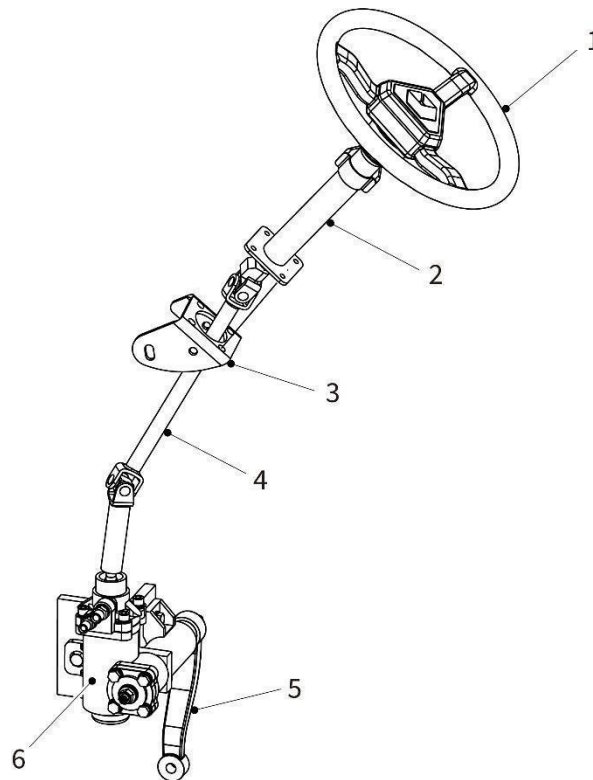
The Tractor has two braking systems, a Foot Brake System, and a Parking Brake (Hand Brake).

The Foot Brake System is a four-wheel braking system. Brake fluid from the main cylinder is routed via a ratio valve to the four independent brakes. The system includes a vacuum valve.

To apply the Parking Brake, simply pull the Parking Brake Lever upwards. The hand brake cable attached to the Parking Brake Lever will apply the pull force to the park brake assembly fitted to the rear (drive) axle, thus engaging the park brake.

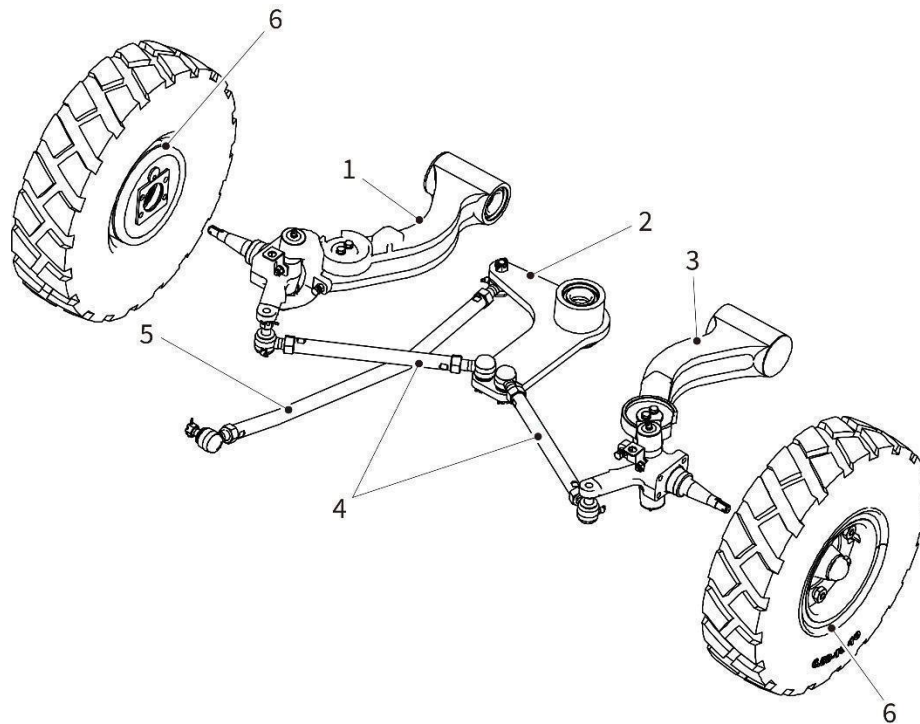
## STEERING SYSTEM

The Tractor is fitted with a hydraulic power steering system whose main components are shown in Figures 10 and 11, below.



- |   |                 |   |                       |
|---|-----------------|---|-----------------------|
| 1 | Steering wheel  | 4 | Steering shaft        |
| 2 | Steering column | 5 | Steering arm (Pitman) |
| 3 | Bracket         | 6 | Power steering box    |

**Figure 10 - Steering System**



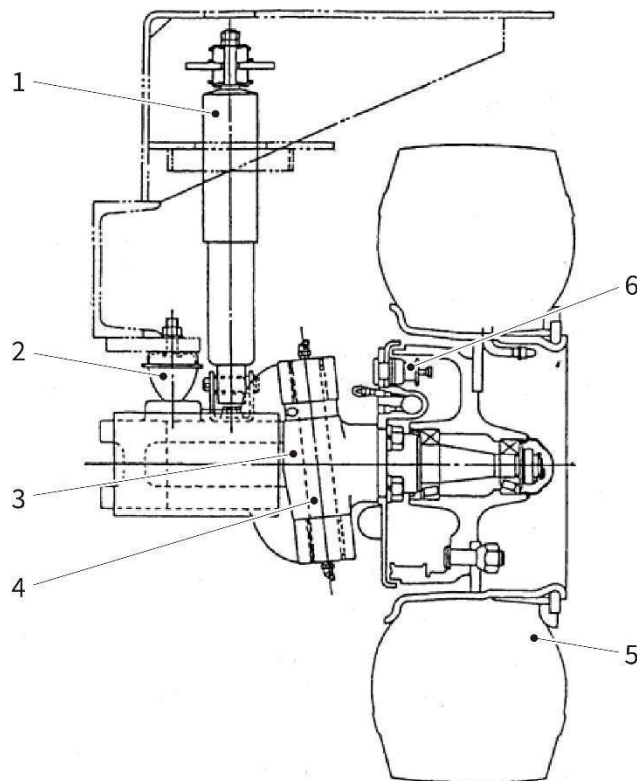
- |   |                    |   |                    |
|---|--------------------|---|--------------------|
| 1 | Left trailing arm  | 4 | Tie rod assembly   |
| 2 | Rocker arm         | 5 | Track rod assembly |
| 3 | Right trailing arm | 6 | Front wheel        |

**Figure 11 - Steering rod**

## SUSPENSION SYSTEMS

The front suspension (Figure 12) is of the longitudinal arm independent suspension type. A pair of coil springs with double-action hydraulic shock absorbers (1) mounted on the front trailing arms absorb shocks, while a pair of rubber bump stops (2) reduce shock when the suspension reaches full compression.





- |   |                      |   |                      |
|---|----------------------|---|----------------------|
| 1 | Front shock absorber | 4 | King pin             |
| 2 | Rubber bump stop     | 5 | Front tire           |
| 3 | Steering knuckle     | 6 | Front brake assembly |

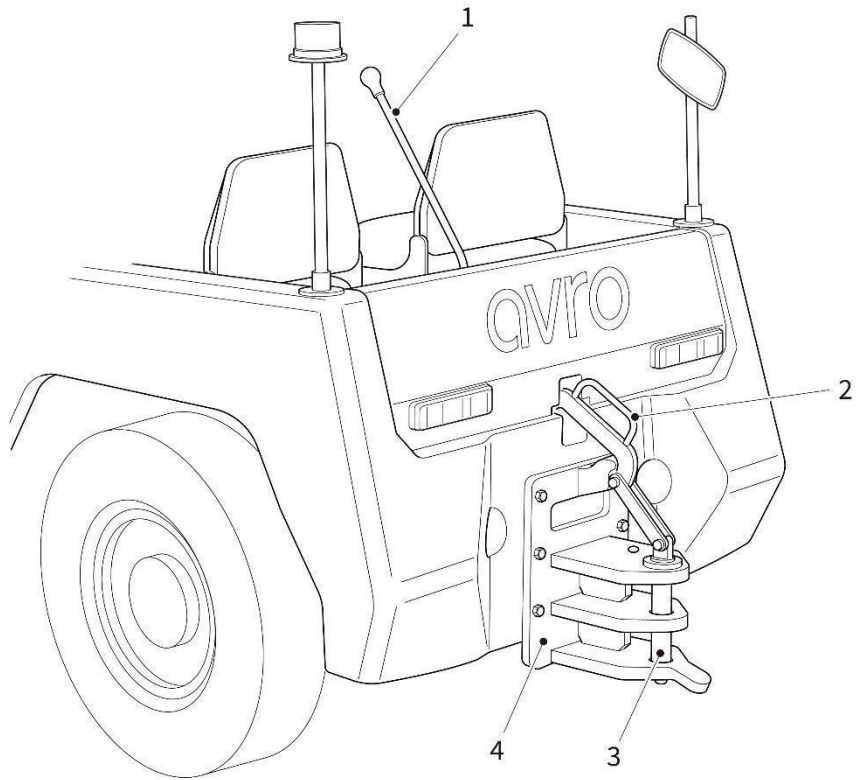
**Figure 12 - Front suspension system**

The rear suspension is comprised of pair of leaf springs with double-action hydraulic shock absorbers to absorb shocks, while a pair of rubber bump stops (2) reduce shock when the suspension reaches full compression.

#### REAR TOWING DEVICE (REAR HITCH)

The Rear Hitch (Figure 13) can be operated from the drivers' or passengers seat using the lever. When the lever (1) is moved forward the towing pin (3) is raised; similarly, the towing pin is lowered under its own weight when the lever is let go.

A lifting handle on the Linkage (2) allows the Rear Hitch to be operated by a person standing beside the rear of the Tractor.



1 Lever

2 Linkage with lifting handle

3 Towing pin

4 Bracket (for towing pin)

**Figure 13 - Rear towing device**

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## REFUELLING

Refer to Figure 14 and refuel the Tractor as follows:

### WARNING – PETROLEUM – FIRE AND HEALTH HAZARD

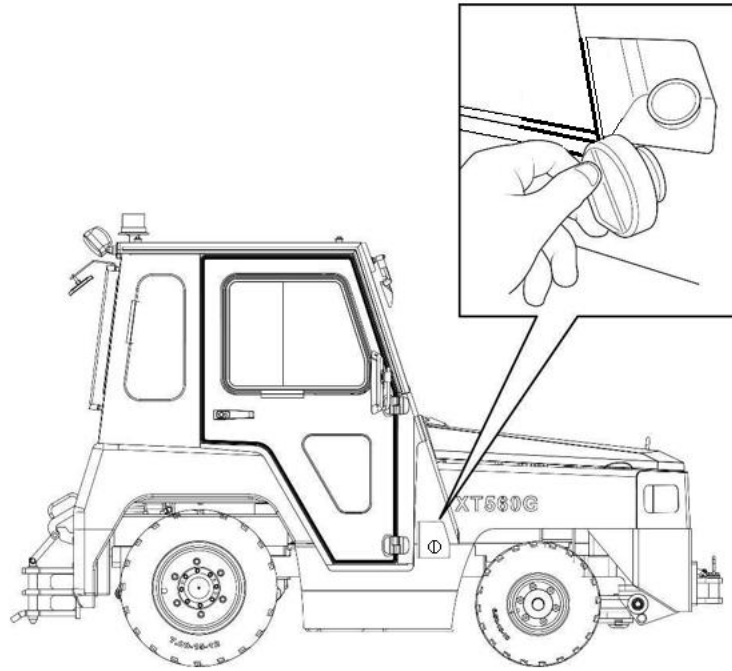


**Fuel expands when heated. Expanding fuel in an over full tank can cause spills and leaks. Do not overfill the fuel tank.**

**Do not eat, drink or smoke when refuelling the Tractor. If fuel is ingested, or comes into contact with your eyes, nose or mouth, seek medical assistance immediately.**

**Fuel spillages are a fire and slip hazard. Always clean up any spillages.**

- Make sure that the Tractor is shut down, and that there are no naked flames or combustibles nearby.
- Make sure that the Tractor is standing on level ground, and that the Tractor is level with the ground.
- Locate the fuel door.
- Open the fuel door and remove the fuel cap.
- Fill the tank with the appropriate grade of gasoline.
- Refit the fuel cap and close the fuel door.



**Figure 14 – Refuelling**

## OPERATION

Before starting the Tractor:

- Make sure that the EMERGENCY STOP switch is in the open position, and the Gear Lever is in the Neutral position.
- Rotate the Start Switch in a clockwise direction to the On position. The instrument panel will activate, and the Tractor will self-test for approximately 2 to 3 seconds.
- If the self-test detects a fault, do not attempt to use the Tractor and REPORT the fault.
- When the self-test is completed successfully, the Instrument Panel will display vehicle data normally.
- Rotate the Start Switch clockwise to the crank position. The engine will start.
- If the engine fails to start, wait at least 10 seconds then repeat the five steps above.

### NOTES

The Start Switch should NOT be left in the ON position for more than 10 seconds.

If the Tractor fails to start after several attempts, REPORT the problem. Have a suitably trained and authorised vehicle mechanic check the fuel and ignition system for faults and perform the Troubleshooting Procedure given in this manual.

- Apply the foot brake.
- Allow the engine to idle for 3 minutes before operating the Tractor.
- Release the Parking Brake. The Parking Brake indicator on the Instrument Panel will extinguish.
- Check that it is safe to move the Tractor.
- Using the Gear Shift, select the required gear.
- Release the foot brake.
- Press the Accelerator Pedal, the Tractor will move.
- Test the Foot Brake and the Parking Brake before using the Tractor. The brakes MUST have a good and reliable performance. If not, do not use the Tractor and report the problem.
- The high-speed forward gear should only be used for unladen travel on level ground.
- The low-speed forward gear MUST be used when towing, when maximum towing force is required, and when the Tractor is on an up or down gradient. This gear provides maximum torque.
- DO NOT select Neutral gear, or switch OFF the engine, when going downhill.

## PARKING

When parking the tractor:

- Make sure that the Tractor is stable on level ground.
- Set the Gear Shift to Neutral.
- Engage the Parking Brake.
- Rotate the Start Switch counterclockwise to the OFF position.

## STORAGE

If the Tractor is not going to be used for a long time:

- Perform monthly, three-monthly, six-monthly, and 12-monthly lubrication.
- Drain the radiator.
- If necessary, perform the cold weather maintenance (“winterize”) described on page 35.
- Remove the battery and charge it for storage.
- Protect exposed parts against rust, for example, by applying grease.
- Store the Tractor under cover.
- Check the engine every month.

## RECEIPT AND PREPARATION FOR FIRST USE

On receipt of a new XT560G Tractor, before operating the Tractor for the first time, you **MUST** perform the following:

- Make sure that all loose packaging has been removed from the Tractor.
- Check the Tractor and its components for damage. If there is any visible damage, **DO NOT OPERATE THE TRACTOR**. Contact AvroGSE immediately for assistance. Contact details for AvroGSE are given inside the front cover of this manual.
- Perform an inventory of all parts included with the Tractor and verify that all loose components and fasteners are accounted for. If any are missing, contact AvroGSE immediately for assistance.

- Attach all component parts not already attached to the Tractor.
- Make sure that all necessary fluids (for example fuel, engine oil, coolant) are checked and additional fluid added as needed.
- Verify that the Tractor is fully serviceable by performing the Daily Maintenance checks and Weekly Maintenance checks described in the Scheduled Maintenance section of this manual.
- Move the Tractor to its operating location.
- Complete any receipt documentation and maintenance records as required.

After 100 hours of operational use of the Tractor, replace the oil in the Transmission. This is in addition to the Transmission oil changes specified in the Scheduled Maintenance and Lubrication Diagram.

## SCHEDULED MAINTENANCE

Scheduled maintenance is limited to the activities specified in the Scheduled Maintenance Table below. The maintenance intervals given are approximate, assume heavy use of the XT560G Tractor, and may be varied by  $\pm 10\%$  without adverse effects. Every Tractor should be inspected and serviced based on its own requirements, for example variation in the hours of use and the environment in which it is used.

An **X** in the Scheduled maintenance Table indicates that the activity described should be performed at that maintenance period.

When fitting fasteners, DO NOT apply thread-locking adhesive. A specific torque setting must be applied to the wheel nuts as detailed on page 46. For other bolts and fasteners, refer to the guidance on torque settings given on pages 46 and 47.

### NOTE


In the Scheduled Maintenance Table, the number of operational hours use specified as requiring 3-Monthly Maintenance to be performed is less than half the equivalent figure for 6-Monthly Maintenance. This is deliberate. The operational hours triggering 3-Monthly Maintenance comply with the recommendations of the engine manufacturer.

It is not necessary to perform Daily Maintenance if a higher level of maintenance has been performed in the preceding 24 hours.

	Task	Dail y	Wee kly	Mon thly	3 Mont hly (150 hrs)	6 Mon thly (500 hrs)	12 Mont hly (1000 hrs)
<b>1</b>	<b>Cleaning</b>						
a.	Use water and degreaser, or a domestic detergent and water solution. Do not use industrial cleaning agents, or caustic agents, or aircraft de-icing and cleaning agents. Use of a spray washer is permitted.	X	X	X	X	X	X
b.	Remove dirt and dust from the top surface of the battery and clean each battery terminal.				X	X	X
c.	Wipe oil, dirt and dust from wires and electrical harnesses in engine compartment.					X	X
d.	If significant corrosion is present, grind off the corrosion, coat the affected area with corrosion protection fluid (if available), apply primer paint, and retouch paintwork.						X
<b>2</b>	<b>Visual Inspection</b>						



	<b>Task</b>	<b>Dail y</b>	<b>Wee kly</b>	<b>Mon thly</b>	<b>3 Mont hly (150 hrs)</b>	<b>6 Mon thly (500 hrs)</b>	<b>12 Mont hly (1000 hrs)</b>
a.	Walk around the Tractor and examine the Tractor for the following. During the inspection tighten any fasteners that are loose.	X	X	X	X	X	X
b.	Check Tractor body and cab are undamaged. Minor damage or corrosion is acceptable. Damage to the body or cab that may impair or affect the operation of the Tractor must be repaired before operating the Tractor.	X	X	X	X	X	X
c.	Check wing mirrors are present and undamaged. Check rear view mirror is present and undamaged. Replace missing or damaged mirrors.	X	X	X	X	X	X
d.	Check windscreen and windows do not have cracked glass. If glass cracked, do not use Tractor until damaged glass has been replaced.	X	X	X	X	X	X
e.	Check that the headlights, indicator lights and rear lights are present and undamaged. Switch ON the ignition and check that all the lights work. Repair or replace any that are not serviceable. DO NOT use a Tractor with an unserviceable light.	X	X	X	X	X	X
f.	Check that the Beacon is present, secure, and undamaged. Check that the Beacon functions correctly. Replace or repair if unserviceable. DO NOT use a Tractor with an unserviceable Beacon.	X	X	X	X	X	X
g.	Check that the Rear Coupler is undamaged, secure, and functions correctly. Repair if required.	X	X	X	X	X	X
h.	Check that the Front Coupler is undamaged, secure, and functions correctly. Repair if required.	X	X	X	X	X	X
i.	Check tires for leaks and damage. Check surface condition of tires. Check tires meet legal requirements for minimum tread depth. Replace if damaged or worn-out.	X	X	X	X	X	X

	Task	Dail y	Wee kly	Mon thly	3 Mont hly (150 hrs)	6 Mon thly (500 hrs)	12 Mont hly (1000 hrs)
j.	Check tightness of wheel nuts. Front wheels :210 Nm (155 ft/lbs). Rear wheels: 420 Nm (310 ft/lbs) Re-tighten if required.		X	X	X	X	X
k.	Check pressure of front tires is 75 ± 3 psi (5.17 ± 0.21 Bar (gauge)). Adjust tire pressure if required.	X	X	X	X	X	X
l.	Check pressure of rear tires is 95 ± 3 psi (6.55 ± 0.21 Bar (gauge)). Adjust tire pressure if required.	X	X	X	X	X	X
<p><b>WARNING – BURN HAZARD</b></p>  <p><b>Hot water in the radiator will scald. Make sure that the engine has cooled down before removing the radiator cap. Wear Personal Protective Equipment (PPE) including eye shields or protective goggles, and suitable protective gloves.</b></p>							
m.	Check coolant level. Add coolant if required.	X	X	X	X	X	X
n.	Check engine oil level. Add oil as required. Refer to the Fuel, Lubricants and Consumables section of this manual for details of the engine oil.	X	X	X	X	X	X
o.	Check the fuel level. Refuel Tractor if necessary.	X	X	X	X	X	X
<b>3</b>	<b>Operation</b>						
a.	Start the engine. Check the operation of the steering and braking systems. If not functioning correctly, report the problem and DO NOT use the Tractor until it has been repaired.	X	X	X	X	X	X
b.	Check the operation of the electrical system. Check that all readings on the Dash Display Screen are normal. If there is a problem, report the problem and DO NOT use the Tractor until it has been repaired.	X	X	X	X	X	X
c.	Listen to the sound of the engine when it is idling, at medium speed and at high speed. If you hear anything unusual in the sound of the engine, report the problem.		X	X	X	X	X

	Task	Dail y	Wee kly	Mon thly	3 Mont hly (150 hrs)	6 Mon thly (500 hrs)	12 Mont hly (1000 hrs)
<b>4</b>	<b>Mechanical Checks</b>						
a.	Check radiator and water hoses for leaks. Check radiator cap is present and secure. Replace leaking components.	X	X	X	X	X	X
b.	Check water pump for leaks. Replace if necessary.			X	X	X	X
c.	Clean Air Filter. Examine Air Filter and replace if damaged. NOTE this action may need to be done more frequently, depending upon the operating conditions.		X	X	X	X	X
d.	Replace Air Filter. NOTE this action may need to be done more frequently, depending upon the operating conditions.					X	X
e.	Check fuel lines for leaks. Replace leaking components.		X	X	X	X	X
f.	Check condition and tightness of fan belt. If necessary, replace fan belt, and/or check and replace tensioner.		X	X	X	X	X
g.	Check brake fluid level. Top-up brake fluid as required. Refer to the Fuel, Lubricants and Consumables section of this manual for details of the brake fluid.		X	X	X	X	X
h.	Replace brake fluid. Refer to the Fuel, Lubricants and Consumables section of this manual for details of the brake fluid.						X
i.	Check condition and adjust clearance of brake shoes.						X
j.	Check, and if required, adjust the free stroke of the brake pedal and parking brake.					X	X
k.	Check parking brake cable. Replace if damaged or worn. Adjust if loose.			X	X	X	X

	Task	Daily	Weekly	Monthly	3 Monthly (150 hrs)	6 Monthly (500 hrs)	12 Monthly (1000 hrs)
l.	Replace power steering oil. Refer to the Fuel, Lubricants and Consumables section of this manual for details of the power steering oil.					X	X
m.	Check power steering system for leaks.						X
n.	Check steering column and steering shaft for damage or other problems. Repair if required. Check play clearance of steering wheel and adjust if required. If necessary, tighten the steering system.						X
o.	Check steering system track rod and tie rods. Replace if damaged.						X
p.	Check engine, torque converter, Transmission, and Drive Axle for oil leaks. Repair any leaks found.						
q.	Check Transmission fluid (oil) level. Top-up fluid as required. Refer to the Fuel, Lubricants and Consumables section of this manual for details of the Transmission fluid.			X	X	X	X
r.	Replace oil filter in Transmission.					X	X
s.	Replace Transmission oil. Refer to the Fuel, Lubricants and Consumables section of this manual for details of the Transmission oil.						X
t.	Replace Transmission suction filter (strainer filter).						X
u.	Replace engine oil. Refer to the Fuel, Lubricants and Consumables section of this manual for details of the engine oil.			X	X	X	X
v.	Check drive shaft for damage or wear. Replace if required.				X	X	X
w.	Replace engine oil filter.			X	X	X	X
x.	Replace Drive Axle Differential Gear oil. Refer to the Fuel, Lubricants and Consumables section of this manual for details of the oil.						X
y.	Replace fuel filter.					X	X
z.	Drain dirt and debris from fuel tank.						X
aa.	Replace in-tank fuel filter.						X

	<b>Task</b>	<b>Dail y</b>	<b>Wee kly</b>	<b>Mon thly</b>	<b>3 Mont hly (150 hrs)</b>	<b>6 Mon thly (500 hrs)</b>	<b>12 Mont hly (1000 hrs)</b>
ab.	Check, and if necessary, tighten, the securing hardware for the connecting sections of the Drive Shaft.						X
ac.	Check front and rear suspension systems are undamaged and in a satisfactory working condition. Replace unserviceable components.					X	X
<b>5</b>	<b>Electrical Checks</b>						
a.	Examine wires and electrical harnesses for damage or abrasion to the insulation, and loose connections.					X	X
b.	Check that alternator and starter are secure and in a satisfactory working condition. Associated electrical wiring must be secure and undamaged. Replace if necessary.					X	X
<b>6</b>	<b>Lubrication</b>						
a.	Lubricate Tractor in accordance with the Lubrication Chart (if not already done in this maintenance sequence).		X	X	X	X	X
<b>7</b>	<b>Maintenance Records</b>						
a.	Complete all required maintenance records.	X	X	X	X	X	X

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## **COLD/HOT WEATHER MAINTENANCE**

When the seasons change, perform the following cold weather/hot weather maintenance:

- Perform “Monthly Maintenance”.
- Clean fuel filter.
- Drain engine oil and replace with oil that is suitable for the coming cold or hot weather. Flush engine oil system with the fresh oil before filling. Refer to the Fuel, Lubricants and Consumables section of this manual for details of an appropriate oil.
- Before cold weather arrives, drain the radiator and cooling system. Flush the cooling system with clean water. Then refill with an appropriately rated anti-freeze solution that includes industrial ethylene glycol.
- Before hot weather arrives, drain the radiator and cooling system. Flush the cooling system with clean water. Then refill with an appropriately rated coolant.
- Record that this maintenance has been completed.

## FUEL, LUBRICANTS AND CONSUMABLES

Fuel/Lubricant	Specification
Fuel	Gasoline
Engine oil	Multi-viscosity oil is recommended. Synthetic oils are not required. For ambient temperatures above -18 degrees C (0 degrees F), use SAE 10W-30 engine oil If ambient temperatures are consistently below -18 degrees C (0 degrees F), use SAE 5W-30 engine oil
Transmission oil	ATF Dextron II
Power Steering oil	Universal Power Steering Fluid
Drive Axle Differential oil	80W-90 Gear Oil
Brake fluid	Dot 4 Brake Fluid
Grease	Heavy duty Lithium based grease

### NOTE

To achieve optimum engine performance and durability, it is important that you only use engine lubricating oils displaying the American Petroleum Institute (API) “Starburst” Certification Mark “FOR GASOLINE ENGINES” on the container.



### FILL CAPACITIES

Item	Fill capacities (L)
Fuel tank	80.0
Engine oil (with oil filter)	7.2
Transmission oil	9.0
Power Steering oil	1.0
Drive Axle Differential oil	6.5
Brake fluid	0.6

Grease	As required
Coolant	11.0

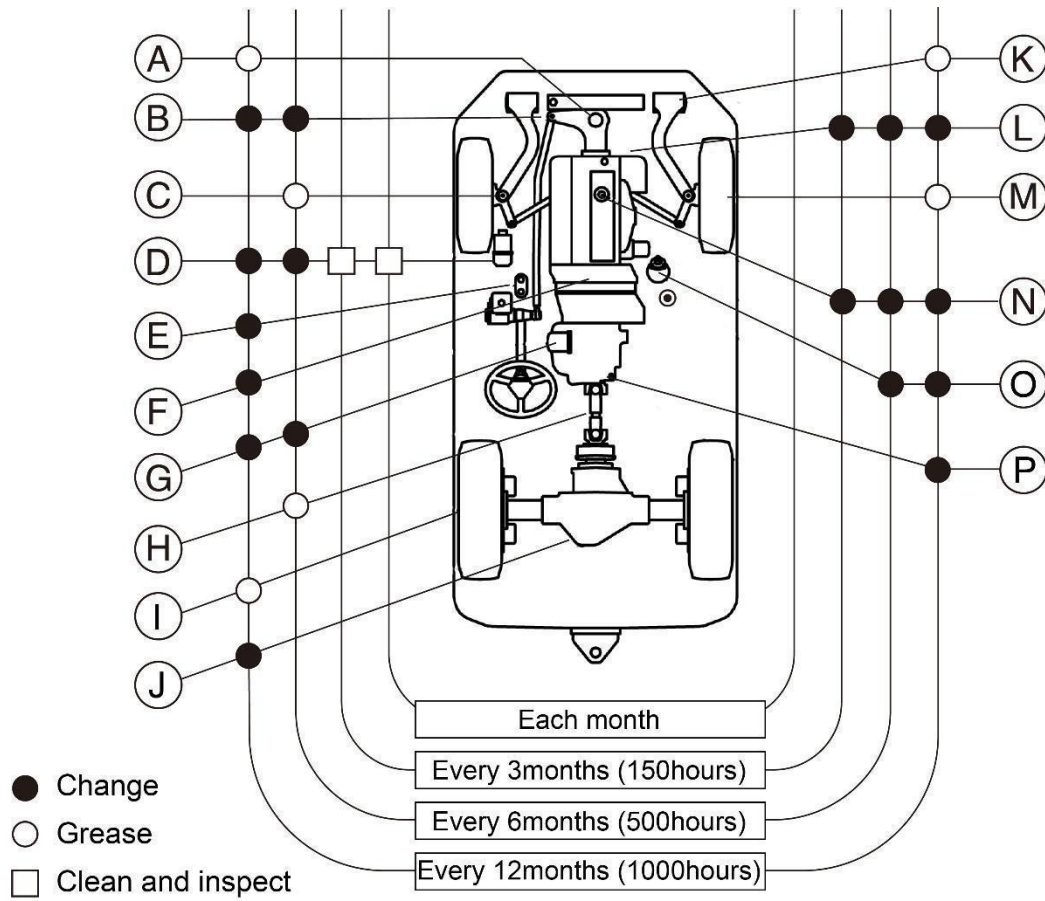
CONSUMABLES

Consumable	Type
Air filter element	Part No. PRPW00419
Suction Filter (used in Transmission)	Part No. PRPW00709
Suction Filter Gasket (used in Transmission)	Part No. PRPW00708
Engine Oil Filter	Part No. PRPW00060
Fuel Filter	Part No. PRPW00307
In-tank Fuel Filter	Part No. PRPW00070



# LUBRICATION

Lubrication requirements are summarised in this Lubrication Diagram.



- |   |   |   |                                  |
|---|---|---|----------------------------------|
| A | Rocker bearing grease                         | I | Rear Wheel bearing grease        |
| B | Power Steering Fluid                          | J | Drive Axle Differential Gear oil |
| C | Kingpin grease                                | K | Cantilever bearing grease        |
| D | Air Filter                                    | L | Engine Oil Filter                |
| E | Brake fluid                                   | M | Front Wheel bearing grease       |
| F | Transmission Suction Filter (strainer filter) | N | Engine oil                       |
| G | Transmission Oil Filter                       | O | Fuel filter                      |
| H | Transmission Shaft Grease                     | P | Transmission oil                 |

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## Figure 15 – Lubrication diagram

### NOTES

**Air Filter element.** The Air Filter element has an expected life of 300 to 500 hours depending upon environmental conditions. However, in sandy/desert conditions the life of the Air Filter element may be considerably less. Clean and inspect the Air Filter element monthly and replace if necessary. Do not exceed 500 hours use.

**Engine oil and filter.** The engine oil and filter must be changed every 150 hours or 3 months, whichever occurs first. The engine oil and filter should be changed more frequently if the Tractor is operating in dusty or extremely dirty areas, or during cold weather.

## TROUBLESHOOTING AND FAILURE DIAGNOSIS

Troubleshooting and failure diagnosis on the XT560G Tractor is performed by four methods.

- The engine includes a Built-In-Test (BIT) capability. If a problem occurs with the engine, an engine MIL (Malfunction Indicator Lamp) will be displayed on the Dash Display Screen.
- For detailed troubleshooting and failure diagnosis on the engine, including fault isolation and identification for the engine MIL's, refer to the PSI NGE 4G DIAGNOSTIC MANUAL Appended to this manual. Refer also to the Additional MIL Message Table on page 45.
- Visually examine the tractor for obvious problems, using the information given in the Scheduled Maintenance Table as a guide. Also check the ATM Mini Fuses in the Central Control Box.
- For suspected mechanical problems, other than with the engine, perform the Troubleshooting Procedure given in the Troubleshooting Table below.
- For general electrical problems, a Diagnostic Trouble Code (DTC) will be displayed on the Dash Display Screen. Refer to the DTC Message Table on page 45 for fault isolation and corrective action.

**Troubleshooting Table**

Sub-Assembly	Trouble	Probable Cause	Corrective Action
Automatic Transmission	Power is not transmitted	1. No pressure build-up:	
		a. Insufficient oil.	Top-up oil level.
		b. Oil pump and/or drive oil line unserviceable.	Replace faulty parts.
		c. Control valve damaged or faulty.	Replace control valve.
		d. Seal on clutch piston unserviceable.	Visually check seal. Replace if necessary.
		2. Mechanical damage on:	
		a. Input shaft.	Examine, and repair or replace as necessary.
		b. Gear.	
		c. Clutch hub.	
		d. Driving plate or driven plate.	
Automatic Transmission	Output decrease	1. Oil pressure too low:	
		a. Insufficient oil.	Top-up oil level.

Sub-Assembly	Trouble	Probable Cause	Corrective Action		
		b. Clogged strainer.	Clean or replace.		
		c. Spring of regulating valve has weakened, or piston unserviceable.	Check. Replace as necessary.		
		d. Seal on clutch piston unserviceable.			
		2. Mechanical damage:			
		a. Damaged or deformed impeller.	Replace damaged or faulty parts.		
		b. Clutch hub is deformed.			
		c. Driving plate or driven plate is deformed.			
		d. Use of incorrect oil.	Drain oil and replace with specified oil.		
		Automatic Transmission	Oil temperature abnormally high	a. Incorrect oil level.	Drain, or top-up, oil until correct oil level is achieved.
				b. Vane makes contact with adjacent parts.	Replace faulty parts.
c. Drag due to worn driving plate and/or driven plate.	Replace faulty parts.				
d. Bearing is worn or seized.	Check and repair or replace as required.				
e. Oil cooler unserviceable.					
f. Clutch slippage or low efficiency due to use of incorrect oil.	Drain oil and replace with specified oil. If necessary, replace clutch disk.				
g. Transmission oil pump is worn or damaged.	Replace faulty parts.				
Abnormal noise emitted by Transmission	a. Insufficient oil, or cavitation due to trapped air on inlet side.		Top-up oil until correct level is reached. Release trapped air.		
	b. Transmission oil pump unserviceable.		Disassemble and replace faulty parts. Or replace pump.		
	c. Vane in contact with adjacent parts due to deformity.				

Sub-Assembly	Trouble	Probable Cause	Corrective Action	
		d. Damaged input disk.	Disassemble Transmission and replace damaged, faulty, or worn parts.	
		e. Damaged gear and splines.		
		f. Bearing is worn or damaged.		
		g. Worn contact surfaces on clutch hub and driven plate.		
		h. Loose bolt.		Check bolts. Tighten or replace loose bolts.
		i. Clutch slippage due to drop in oil pressure.		Check and rectify oil level.
		j. Cavitation due to clogged strainer.		Clean or replace strainer.
	Oil leak	a. Oil seal faulty or perished.	Replace seal.	
		b. O-ring seal is damaged or perished.		
		c. Loose bolt.	Tighten bolt.	
d. Surface of a matching part is scratched or damaged.		Repair or replace damaged part.		
Automatic Transmission	Clutch engages too slowly.	a. Driving plate and/or driven plate excessively worn.	Examine, clean, and replace as required.	
		b. Oil leak from unserviceable O-ring seal.		
		c. Spring and/or piston of regulating valve unserviceable.		
		d. Blocked oil line.		
		e. Selector valve is unserviceable.		
	Excessive vibration.	a. Accumulator spring is fatigued.	Examine and replace as necessary.	
		b. Accumulator piston faulty.		
		c. Taper driven plate is damaged.		
Drive Shaft	Abnormal noise	a. Flange bolt loose.	Tighten all flange bolts.	

Sub-Assembly	Trouble	Probable Cause	Corrective Action
		b. Insufficient lubrication.	Apply lubricant. For details refer to Lubrication schedule.
		c. Excessive wear of universal joint.	Replace.
Steering system	Steering wheel vibration, shaking, or instability	a. Tire pressure incorrect.	Adjust tire pressure to bring it within specification.
		b. Steering king pin or associated sleeve is worn.	Replace.
		c. Hub bearing is worn, or its clearance is incorrect.	Adjust or replace.
		d. Thrust bearing of king pin is worn.	Replace.
		e. Gear clearance of steering set is incorrect.	Adjust gear clearance.
		f. Front wheel or tire is damaged, or deformed, or has uneven wear.	Repair or replace.
		g. The Toe-in is incorrect.	Adjust.
		h. Steering System loose, not secure.	Tighten securing hardware.
Steering System	Steering wheel is hard to turn.	a. Tire pressure incorrect.	Adjust tire pressure to bring it within specification.
		b. Steering components require lubrication.	Lubricate with grease.
		c. Rear rod ball head requires lubrication.	Lubricate with grease.
		d. Oil in steering system contaminated with debris or foreign substance.	Replace oil and Oil Filter.
		e. Steering system oil level low.	Top-up oil level.
Steering System	Steering wheel is hard to turn	a. Bent steering linkage.	Repair or replace.
		b. Partly gear meshing incorrectly.	Adjust or replace.

Sub-Assembly	Trouble	Probable Cause	Corrective Action
		c. Incorrect steering box gear clearance	Adjust clearance.
		d. King pin bearing is worn or damaged.	Replace.
		e. Toe-in incorrect.	Adjust.
		f. Hydraulic oil leak, or blockage or restriction in a hydraulic hose.	Repair/replace hoses as required and rectify leaks.
		g. Air trapped in Steering System hydraulic hoses.	Vent air from Steering System hydraulics.
	Oil does not rise	a. Hydraulic hose leaking oil, or blockage in a hydraulic hose.	Replace or repair hoses as required.
		b. Oil leak from a Steering System seal.	Replace seal.
Steering System	Steering pulls to one side.	a. Left and right front wheels unbalanced.	Replace.
		b. Brake clearance incorrect on left or right front wheels.	Adjust.
		c. Left and right front wheels toe-in is incorrect.	Adjust.
		d. Steering wheel loose.	Tighten bolt that secures the steering wheel.
		e. Track rod end loose.	Adjust or replace.
		f. Steering box gear clearance incorrect.	Adjust.
	Steering wheel does not return to normal (centre) position.	a. Steering column unserviceable.	Disassemble, clean, and replace unserviceable parts.
		b. Steering gear does not engage correctly.	
		c. Worm gear and/or worm unserviceable.	
		d. Left and/or right wheel toe-in incorrect.	Adjust.

Sub-Assembly	Trouble	Probable Cause	Corrective Action	
		e. Tire pressure incorrect.	Adjust tire pressure to bring it within specification.	
Steering System	Abnormal noise coming from Steering System	a. Air trapped in Steering System hydraulic hoses.	Vent air from Steering System hydraulics.	
		b. Worm gear and/or worm unserviceable.	Disassemble, clean, and replace unserviceable parts.	
Braking System	Insufficient braking force	a. Brake fluid leak.	Locate and repair brake fluid leak. Top-up brake fluid to correct level.	
		b. Air in Braking System hydraulic system.	Vent all air from Braking System hydraulics.	
		c. Contamination on surface of brake lining.	Replace brake linings and rectify contamination source.	
		d. Brake lining is deformed, or brake lining contact is abnormal.	Repair or replace faulty brake components.	
		e. Brake lining is worn.	Replace brake lining.	
		f. Brake master cylinder unserviceable.	Repair or replace master cylinder.	
		g. Blockage or restriction in the brake hydraulic system.	Clean and flush hydraulic components to remove blockage or restriction.	
	Brake only applies on one side		a. Tire pressure incorrect.	Adjust tire pressure to bring it within specification.
			b. Brake clearances are not equal.	Adjust brake clearances.
			c. On the side where the brake does not apply, there is contamination on surface of brake lining.	Replace brake linings and rectify contamination source.
			d. Debris on braking drum.	Clean off the debris.
			e. Brake lining is deformed, or brake lining contact is abnormal.	Repair or replace worn components.



Sub-Assembly	Trouble	Probable Cause	Corrective Action
		f. Brake shoe lining contact is abnormal.	Adjust.
		g. Brake lining is worn.	Replace.
		h. Brake drum excessively worn or damaged.	Replace brake drum.
		i. Bolt securing brake bottom plate is loose.	Tighten or replace bolt.
		j. Brake bottom plate deformed.	Replace.
		k. Clearance of bearing is incorrect.	Adjust or replace bearings.
Braking System	Brake drags	a. Brake pedal fouling due to insufficient clearance.	Adjust/repair.
		b. Wheel cylinder is faulty.	Repair or replace
Braking System	Brake Drags	c. Return spring unserviceable.	Replace.
		d. Brake shoe lining contact is abnormal.	Adjust or replace brake shoes.
		e. Parking brake shoe does not return, or clearance incorrect.	Repair or adjust.
		f. Blocked fluid return port on brake master cylinder.	Clean oil return port.
		g. Blockage or restriction in the Brake hydraulic system.	Clean and flush hydraulic components to remove blockage or restriction.

### Additional MIL Message Table

Item	MIL Message	Probable Fault	Corrective Action
1.	N/A	If you have not already done so, check the ATM Mine Fuses in the Central Control Box.	Replace any fuses that have blown.
2.	1213-5	MIL open circuit.	a. May be caused by having the wrong Dash Display Screen fitted. Replace Dash Display Screen with correct version.
			b. Check MIL circuit wiring for faults.

### DTC Message Table

Item	DTC Message	Probable Fault	Corrective Action
1.	Low Fuel Level!	Indicates need to re-fuel.	Refuel the Tractor.
2.	CAN Bus Disconnected!	Wiring fault in CAN wiring circuit.	Check CAN wiring circuit wiring and components for loose/broken wires and connections.
3.	High Oil Temp!	High Transmission oil temperature.	a. Check and rectify Transmission oil level and oil quality.
			b. Check Transmission oil temperature sensor. Replace if required.
4.	Low Accumulator Pressure!	Low vacuum in the service brake accumulator tank.	a. Check brake vacuum pumps and associated electrical circuit for faults. Rectify as required.
			b. Check vacuum system tubing and clamps for leakage. Rectify as required.

## REPAIR

Repair of the XT560G Tractor is by direct replacement of the faulty or damaged component. The Exploded Parts View illustrations show all the components and how the Tractor is dismantled and re-assembled. All the components are listed in the Parts Breakdown List and the numbers on the Exploded Parts View illustrations are keyed to the Parts Breakdown List.

Replacement parts should be sourced from Avro GSE. The use of major components not obtained from Avro GSE will invalidate the Warranty.

### NOTE

It is expected that replacement fasteners may be sourced locally. If sourcing fasteners locally, make sure that the replacement fasteners are the same type and grade of material, and have the same protective coating, as the original. The Parts Breakdown List specifies the required material and finish.

The vehicle chassis is not available as a spare. Any significant damage to the vehicle chassis will almost certainly be part of catastrophic damage to the Tractor. Also, the time and effort required to strip down the Tractor, replace the chassis, and then rebuild, is such that significant damage to the Chassis renders the Tractor “Beyond Economic Repair”.

### TORQUE VALUES

The Tractor wheel nuts **MUST** be torque tightened to the correct torque settings given below. Failure to torque tighten the wheel nuts to the correct torque setting may result in a wheel coming loose.

#### Wheel Nut torque values

Fastener	Torque setting
Front wheel nuts	210 Nm (155 ft/lbs)
Rear wheel nuts	420 Nm (310 ft/lbs)

The wheel nuts are the only items on the Tractor that have a specific torque setting. For other securing bolts, refer to the general recommended torque values table given on the next page. If in doubt about the strength grade of the bolt, use the lowest figure given for that size of bolt.

**General recommended torque values**

<b>Bolt Strength Grade</b>			<b>4.8</b>	<b>6.8</b>	<b>8.8</b>	<b>10.9</b>
Minimum yield strength			340 MPa	480 MPa	660 MPa	940 MPa
<b>Bolt</b>	<b>Indent hex</b>	<b>Hex Socket</b>	<b>Recommended Torque</b>			
mm	mm	mm	Nm	Nm	Nm	Nm
M6	-	-	-	-	10.4	15
M8	-	-	-	-	25.4	37.6
M10	-	-	-	-	50	72
M12	-	-	-	-	88	126
M14	22	12	69	98	137	165
M16	24	14	98	137	206	247
M18	27	14	137	206	284	341
M20	30	17	176	296	402	569
M22	32	17	225	333	539	765
M24	36	19	314	470	686	981
M27	41	19	441	637	1029	1472
M30	46	22	588	882	1225	1962
M33	50	24	735	1127	1470	2060
M36	55	27	980	1470	1764	2453
M39	60	27/30	1176	1764	2156	2943
M42	65	32	1519	2352	2744	3826

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## ELECTRICAL SCHEMATICS

These Electrical Schematics are provided to assist in troubleshooting.

This manual covers multiple build standards of the XT560G Tractor that were manufactured prior to 2024.

For the vehicle electrical system, the key configuration control items are:

- Whether or not the Tractor has a Cab.

### NOTE

A hydraulic circuit diagram of the Transmission is available in the manual for the Transmission.

### TRACTORS WITH A 2024 MY

For XT560G Tractors with a MY of 2024, the following electrical diagrams are provided (in this sequence):

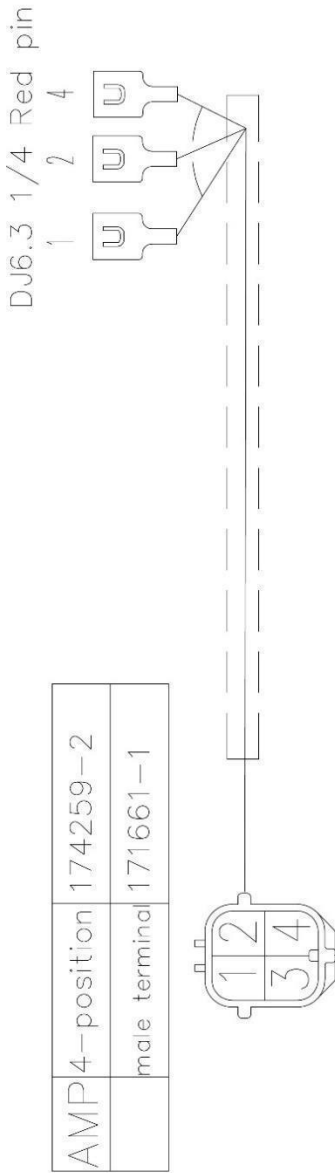
- XT560G Wiring Scheme with Cabin 2022 MY
- XT560G Wiring Scheme without Cabin 2022MY
- XT560G Tractor Harness with Cabin 2022MY
- XT560G Tractor Cabin Harness 2022 MY
- XT560G Dash Display Instrument, Part No. PRPW00541
- XT560G Central Control Box, Part No. PRPW00415
- Ignition Switch Assembly, Part No. PRPW00051
- Transmission Shift Control, Part No. PRPW03253
- XT560G Gear Selector Solenoid Valve Schematic 2019 -2022 MY
- XT560G Brake Vacuum Pump Harness 2018 -2021 MY



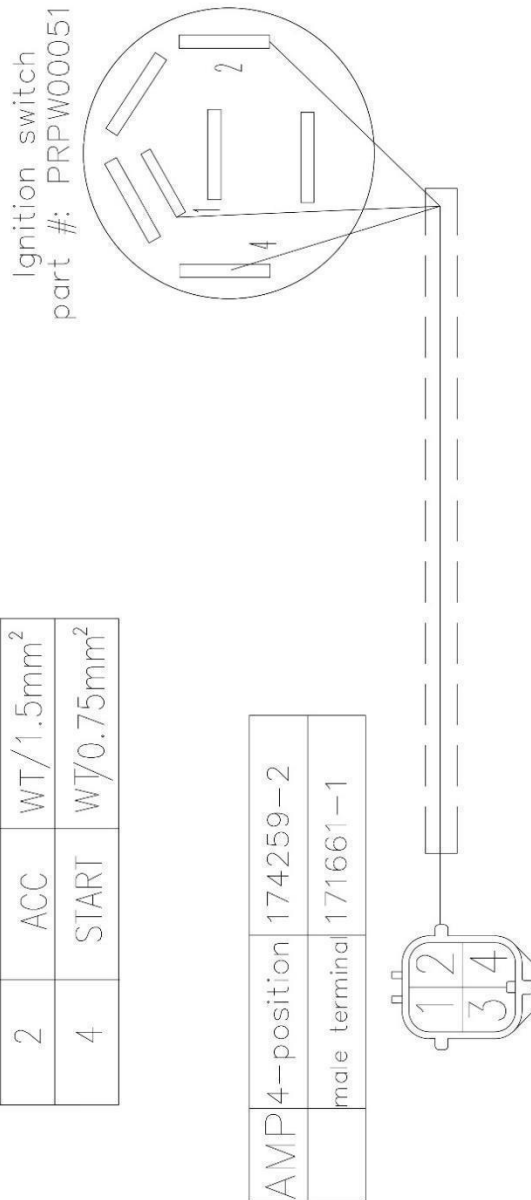




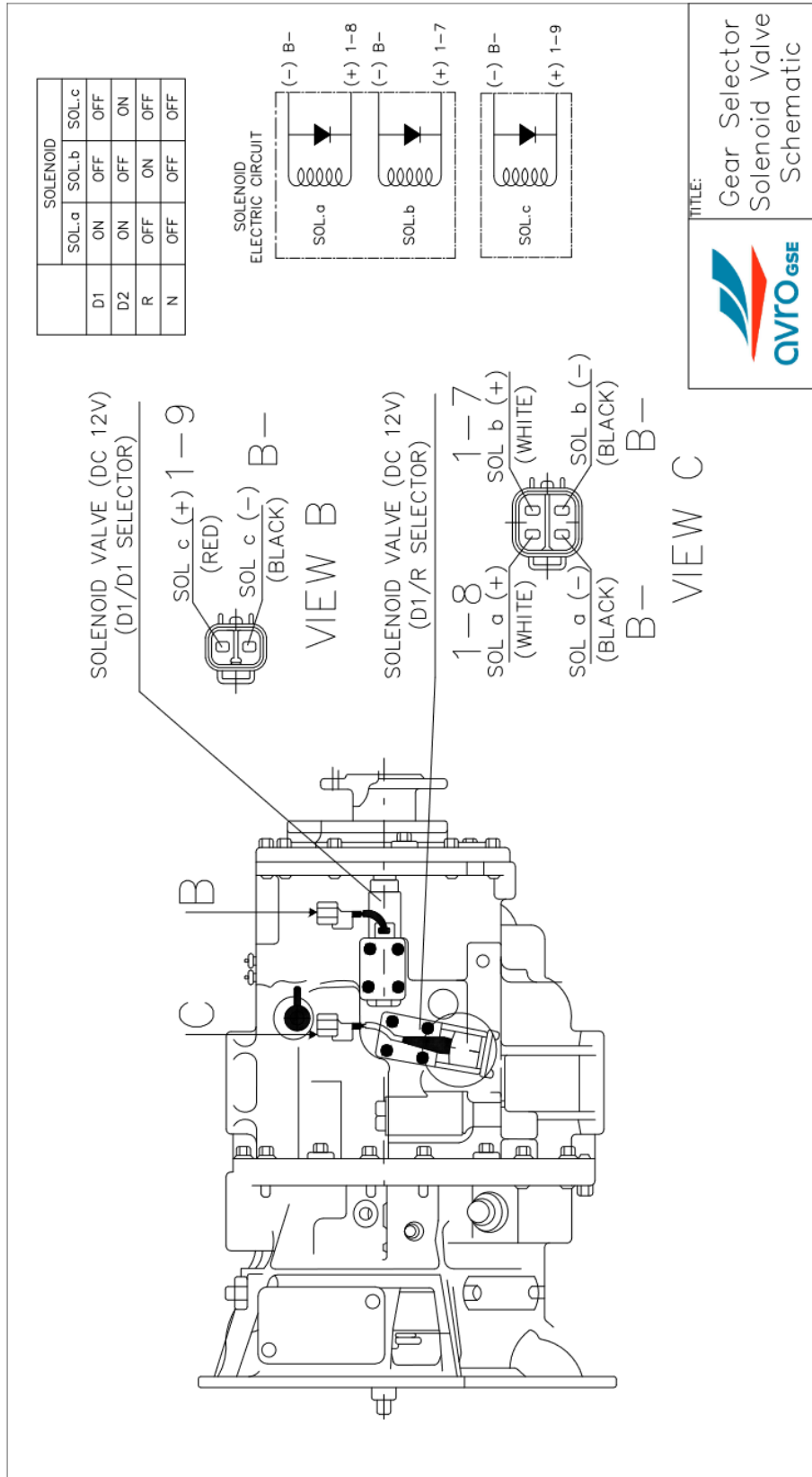




Terminal#	Function	Color/Gauge
1	BAT	RD/1.5mm <sup>2</sup>
2	ACC	WT/1.5mm <sup>2</sup>
4	START	WT/0.75mm <sup>2</sup>



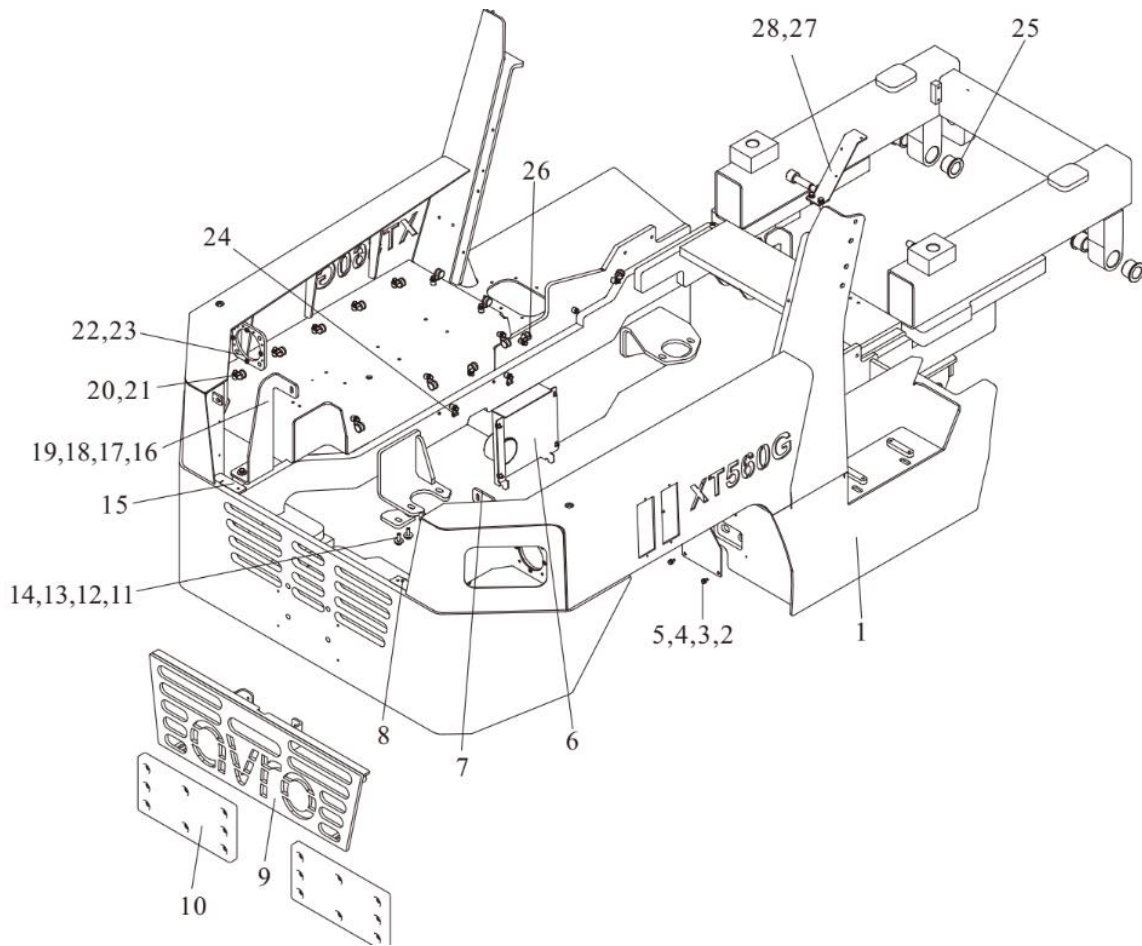
	TITLE:	Ignition Switch Assembly
		PRPW00051



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# EXPLODED PARTS VIEWS & PARTS LISTS

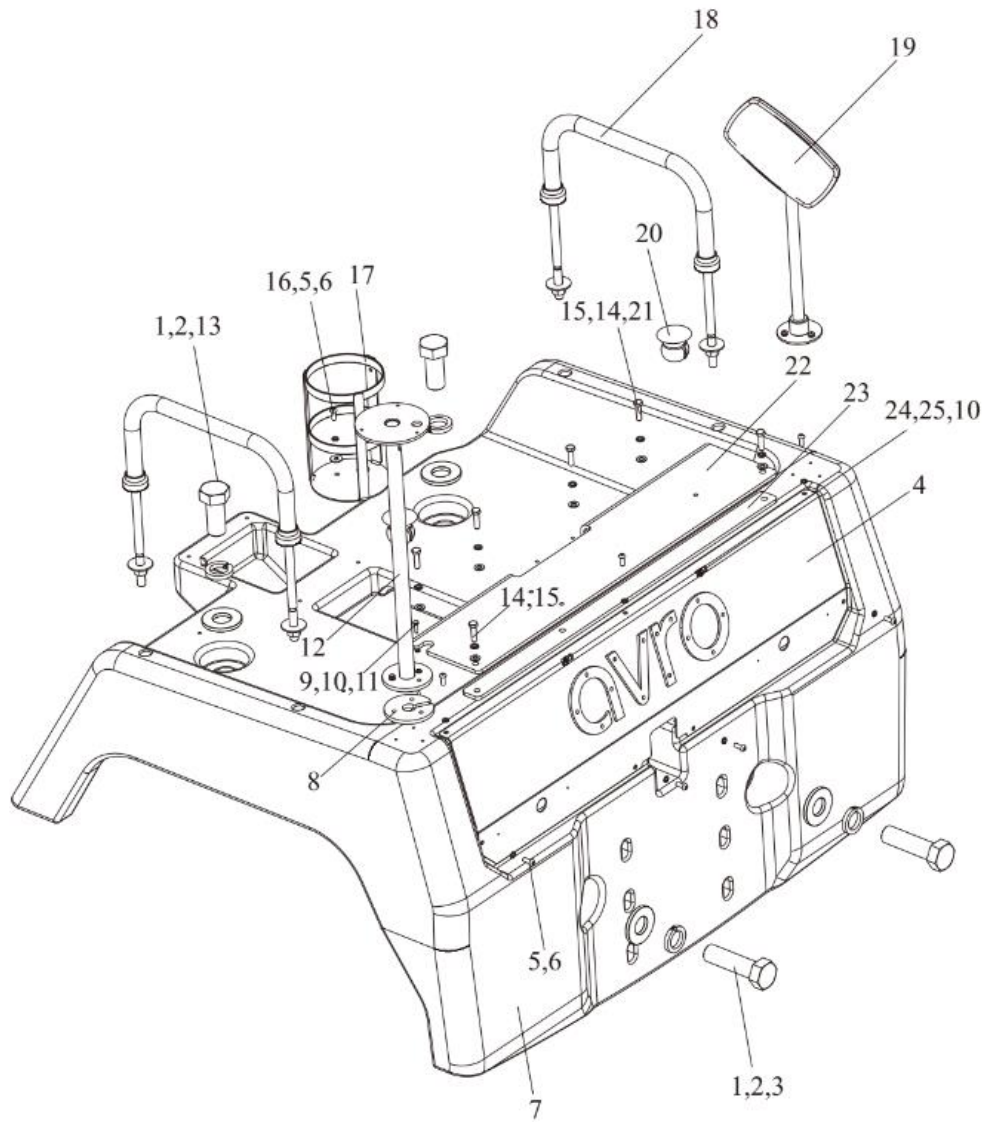
## BODY & EXTERIOR



**Front Body Assembly - Exploded Parts View**

### Front Body Assembly – Spare Parts List

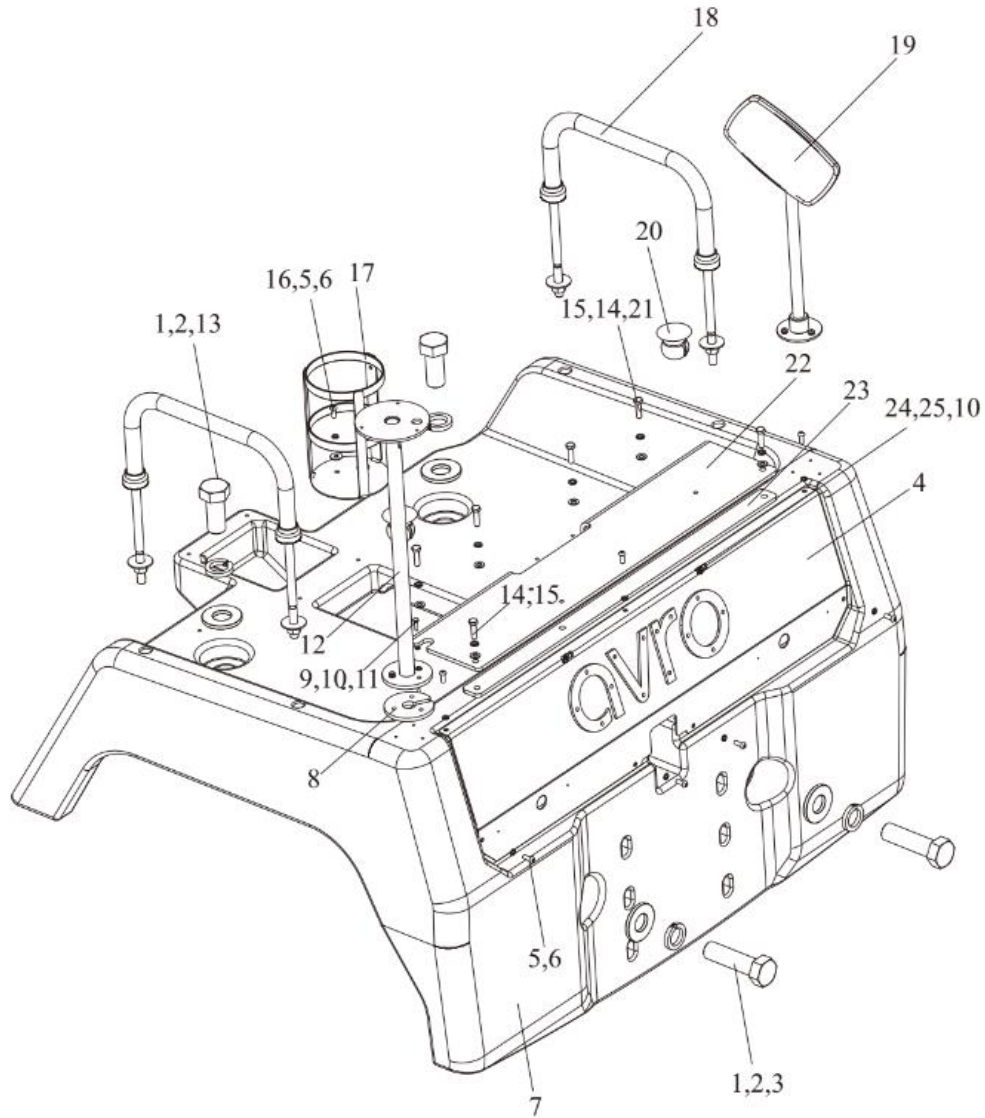
Item	Part No.	Description	Qty	Remarks
1	PRPW00603	Chassis Assembly	1	With cab
	PRPW00604	Chassis Assembly	1	Without cab
2	PRPW00605	Cover Plate	1	
3	PRFA00006	Washer, Flat, M6	46	
4	PRFA00007	Washer, Lock, M6	46	
5	PRFA00001	Bolt, M6 x 20 mm	4	
6	PRPW00606	Intake Hood Assembly	1	
7	PRPW00607	Radiator Stand Assembly, Left	1	
8	PRPW00608	Grille Bracket, Left	1	
9	PRPW00558	Front Grill Assembly	1	
10	PRPW02257	Plastic Bumper, Front/Rear	4	Optional
11	PRPW00609	Retainer	2	
12	PRFA00011	Washer, Flat, M10	4	
13	PRFA00012	Washer, Lock, M10	4	
14	PRFA00008	Bolt, M10 x 30 mm	4	
15	PRPW00610	Grille Bracket, Right	1	
16	PRFA00009	Washer, Flat, 8	8	
17	PRFA00010	Washer, Lock, 8	10	
18	PRFA00013	Bolt, M8 x 25 mm	10	
19	PRPW00611	Radiator Stand Assembly, Right	1	
20	PRFA00014	Bolt, M6 x 10 mm	42	
21	PRFA00002	Clamp, R $\phi$ 20 mm	18	
22	PRPW00612	Headlight Plate	2	
23	PRPW00613	Headlight Gasket	2	
24	PRFA00003	Clamp, R $\phi$ 6	5	
25	PRPW00615	Plate Spring Rear Lining	4	
26	PRFA00005	Clamp, R $\phi$ 40 mm	7	
27	PRFA00009	Washer, Flat, 8	2	
28	PRPW00614	Cable Plate	1	



**Counterweight Mounting - Exploded Parts View**

**Counterweight Mounting – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRFA00018	Washer, Flat, Thickened	4	
2	PRFA00015	Washer, Lock, M36	4	
3	PRFA00019	Bolt, M36 x 130 x 70	2	
4	PRPW00619	Balance Weight Plate	1	With Cab
4		Balance Weight Plate	1	Without Cab
5	PRFA00022	Screw, M8 x 20 mm	9	
6	PRFA00010	Washer, Lock, M8	9	
7	PRPW00621	Rear Counterweight Balance	1	
8		Base Plate	1	Without Cab
9	PRFA00001	Bolt, M6 x 20 mm	3	
10	PRFA00007	Washer, Lock, M6	5	
11	PRFA00006	Washer, Flat, M6	3	
12	PRPW02327	Beacon Light Mount	1	Without Cab
13	PRFA00048	Bolt, M36 x 80 x 70	2	
14	PRFA00012	Washer, Lock, M10	6	
15	PRFA00026	Bolt, M10 x 35 mm	6	
16	PRFA00009	Washer, Flat, M8	2	
17	PRPW00622	Extinguisher Stand	1	
18		Safety Rails	2	Without Cab
19	PRPW00427	Mirror Assembly	1	Without Cab
20	PRPW00620	Decorative Covers	2	
21	PRFA00011	Washer, Flat, M10	6	

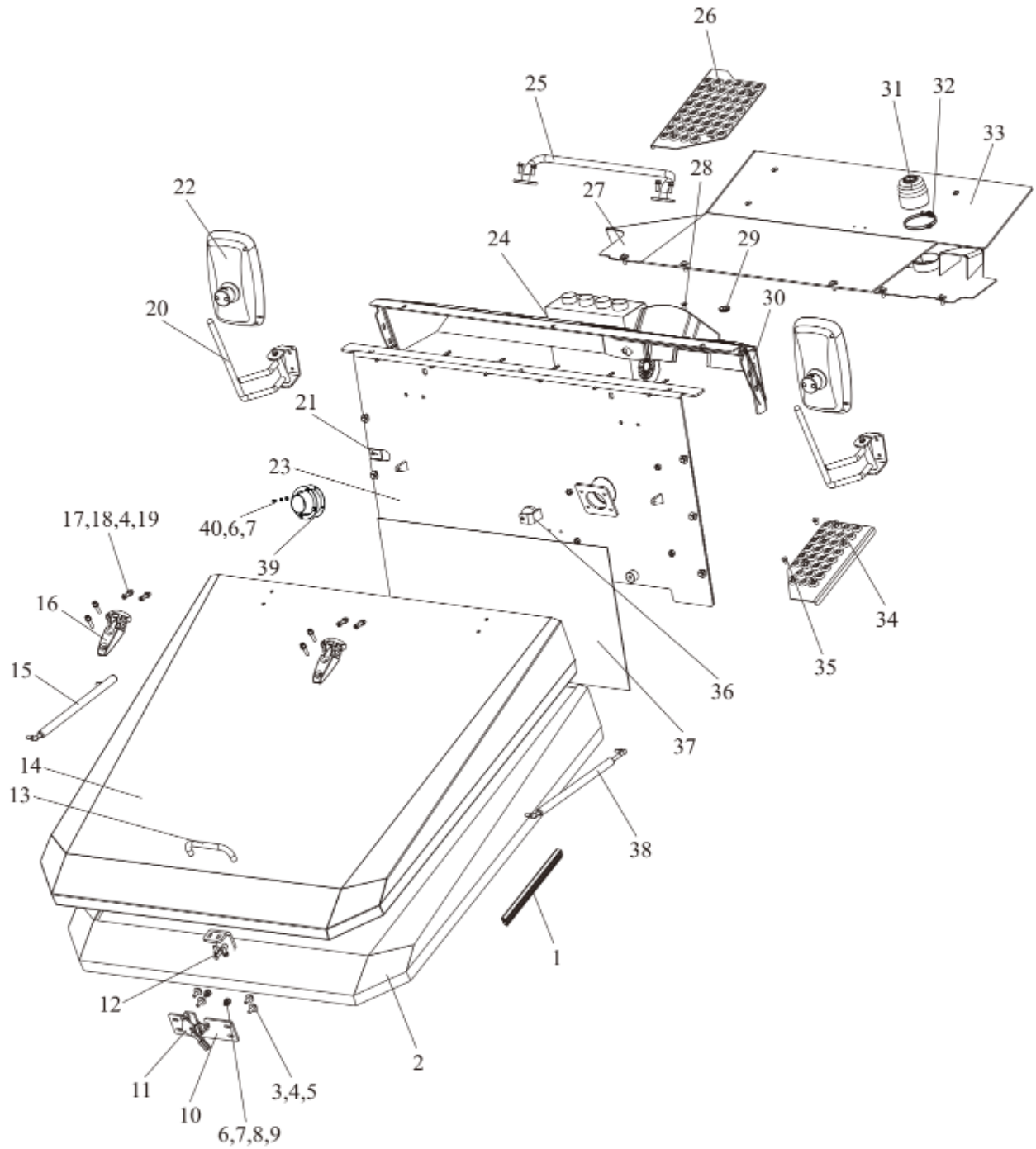


**Counterweight Mounting – Exploded Parts View**



**Counterweight Mounting – Spare Parts List**

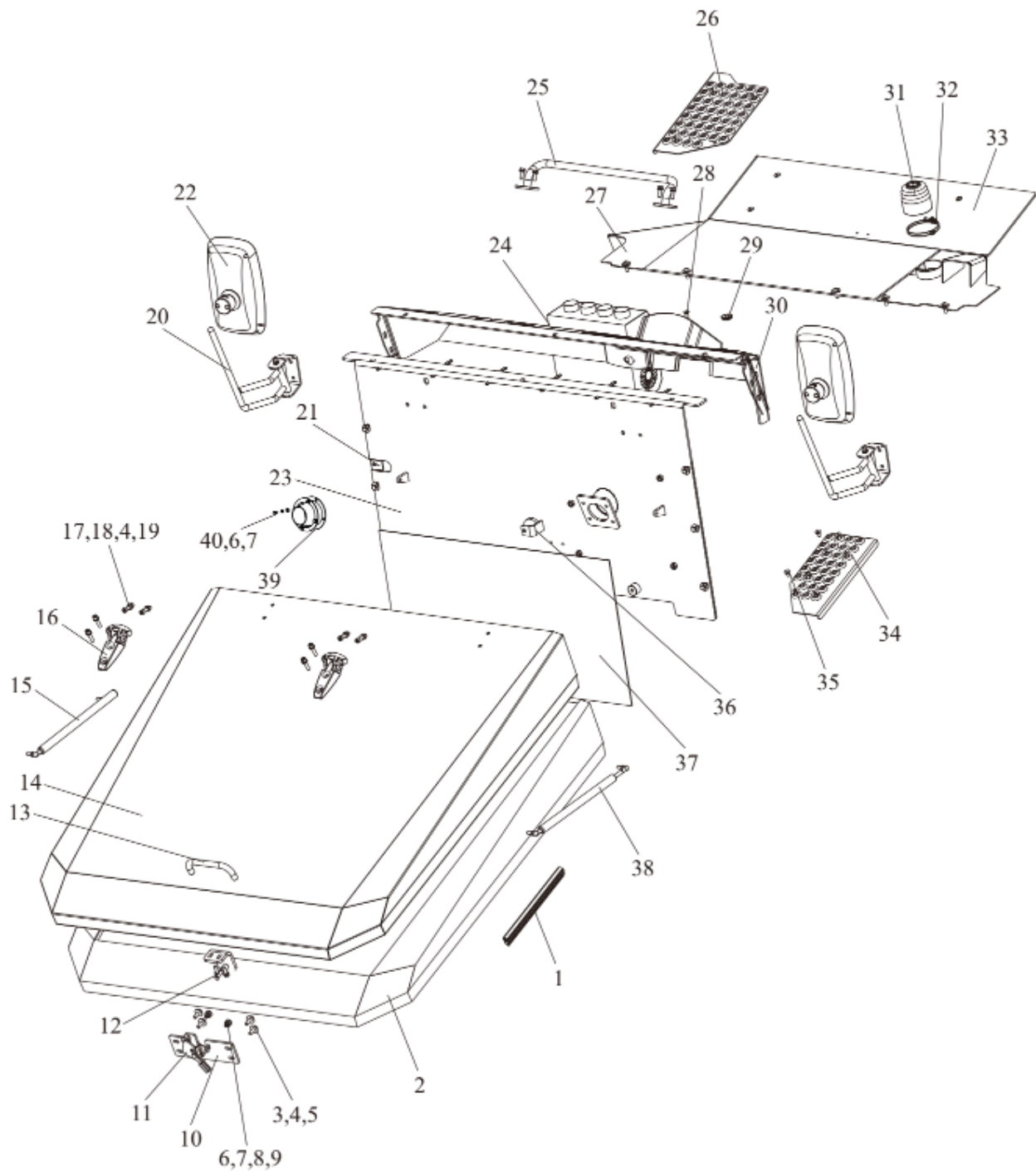
Item	Part No.	Description	Qty	Remarks
24	PRPW03003	Clamp, R $\phi$ 10 mm	2	
25	PRFA00313	Screw, M6 x12 mm	2	



**Exterior Body – Exploded Parts View**

**Exterior Body – Spare Parts List**

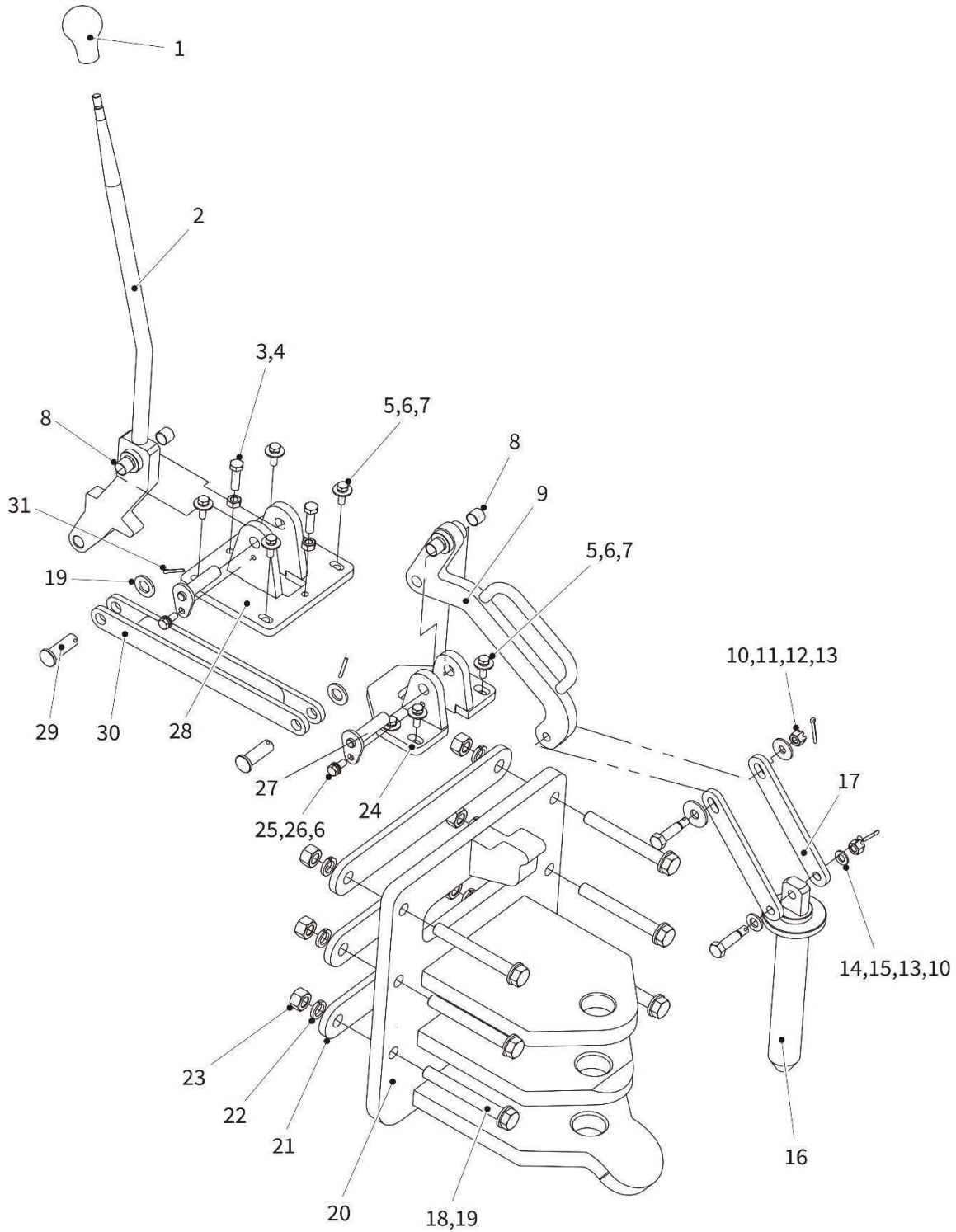
Item	Part No.	Description	Qty	Remarks
1	PRPW00623	Seal Strip	1	
2	PRPW00624	Heat Insulation, Wool	1	
3	PRFA00013	Bolt, M8 x 25 mm	18	
4	PRFA00010	Washer, Lock, M8	30	
5	PRFA00009	Washer, Flat, M8	16	
6	PRFA00006	Washer, Flat, M6	4	
7	PRFA00007	Washer, Lock, M6	2	
8	PRFA00025	Nut, M6	2	
9	PRFA00001	Bolt, M6 x 20 mm	2	
10	PRPW00625	Engine Cover Plate	1	
11	PRPW00199	Hood latch Assembly	1	
12	PRPW00385	Hood latch bolt Assembly	1	
13	PRPW00626	Handle	1	
14	PRPW00457	Engine Cover Assembly	1	
15	PRPW00206	Hood gas spring (right)	1	
16	PRPW00627	Hinge Assembly	2	
17	PRFA00020	Screw, M8 x 35 mm	8	
18	PRFA00021	Nut, M8	8	
19	PRFA00009	Washer, Flat, M8	18	
20	PRPW00628	Wing Mirror Bracket	2	Without Cab
21	PRPW00629	Fixed Plate	1	Without Cab
	PRPW00630	Fixed Plate	1	With Cab
22	PRPW00043	Side Mirror – Exterior	2	Without Cab
23	PRPW00637	Instrument Panel Assembly	1	Without Cab
	PRPW00638	Instrument Panel Assembly	1	With Cab



**Exterior Body – Exploded Parts View**

**Exterior Body – Spare Parts List**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>	<b>Remarks</b>
24	PRPW02374	Heater	1	With Cab See Controls and Instruments
25	PRPW00632	Handhold Assembly	1	Without Cab
26	PRPW00634	Ant-slip surface	1	
27	PRPW02481	Floor Assembly, 2022+ MY	1	
28	PRFA00022	Screw, M8 x 20 mm	3	
29	PRPW00636	Grommet	1	
30	PRPW00637	Instrument Panel Assembly	1	Without Cab
	PRPW00638	Instrument Panel Assembly	1	With Cab
31	PRPW00639	Shaft Sleeve	1	
32	PRFA00023	Double Steel Clamp, 90 x 80	1	
33	PRPW00588	Floor Mat	1	
34	PRPW00640	Anti-slip surface	1	Without Cab
	PRPW00641	Anti-slip surface	1	With Cab
35	PRFA00024	Screw, M8 x 16 mm	8	
36	PRPW00642	Fuel Control Valve Bracket	1	
37	PRPW00643	Insulation Pad	2	
38	PRPW00631	Gas Spring	1	
39	PRPW03321	Wire Sheath	1	
40	PRFA00014	Bolt, M6 x 10 mm	4	With Cab



**Rear Towing Hitch – Exploded Parts View**

**Rear Towing Hitch – Spare Parts List**

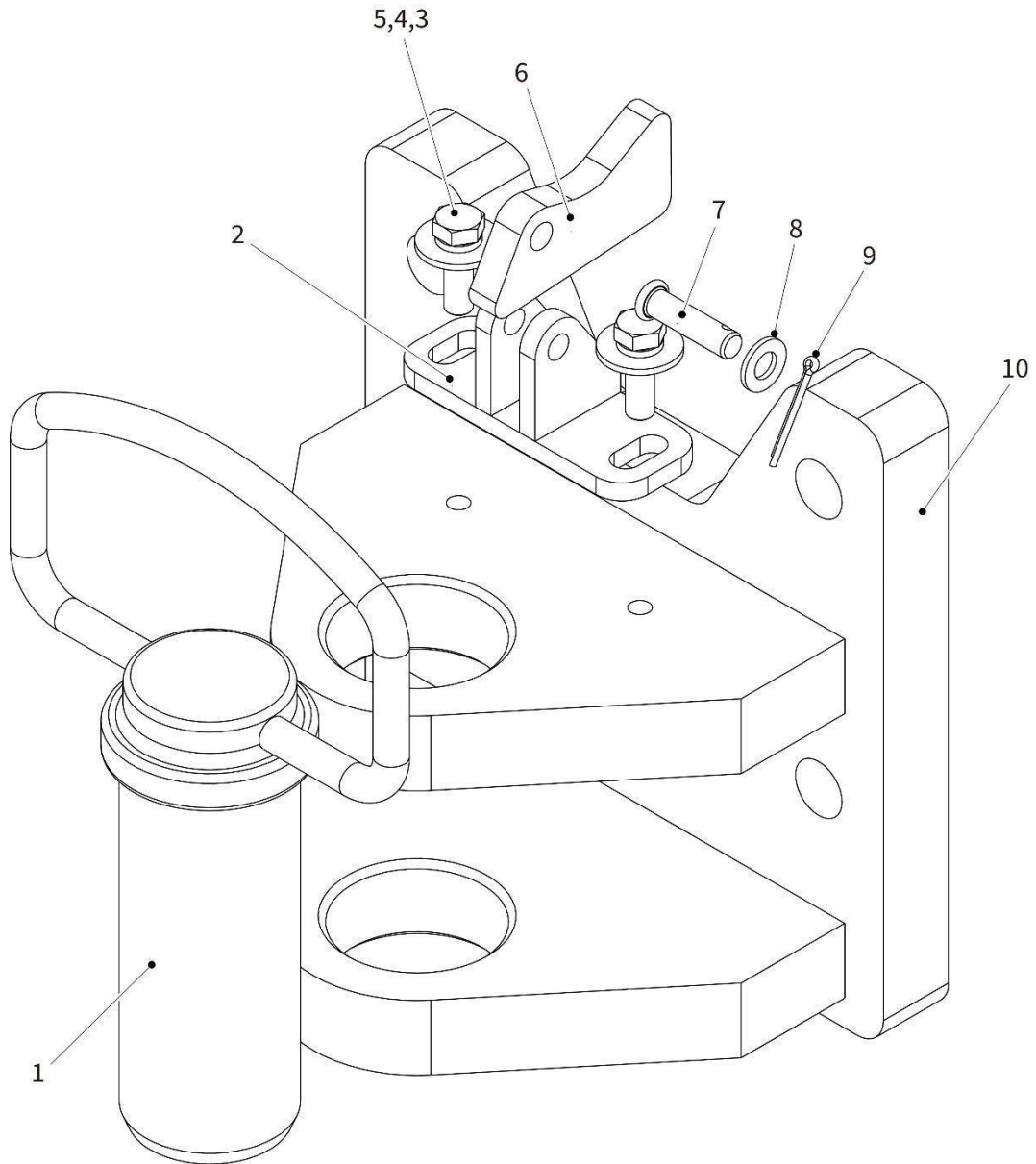
Item	Part No.	Description	Qty	Remarks
1	PRPW00576	Knob, interior hitch handle	1	
2	PRPW00644	Lever Assembly	1	
3	PRFA00026	Bolt, M10 x 35mm	2	
4	PRFA00036	Nut, M10	2	
5	PRFA00013	Bolt, M8 x 25mm	6	
6	PRFA00010	Washer, Lock, M8	8	
7	PRFA00009	Washer, Flat, M8	6	
8	PRPW00802	Bushing	4	
9	PRPW00559	Rear Hitch Handle, Exterior	1	
10	PRFA00087	Nut, Special, M10	2	
11	PRFA00011	Washer, Flat, M10	1	
12	PRFA00030	Washer, Flat, M12	1	
13	PRFA00031	Bolt, Special	2	
14	PRFA00011	Washer, Flat, M10	1	
15	PRFA00030	Washer, Flat, M12	1	
16	PRPW00645	Towing Pin	1	
17	PRPW00646	Plate-link	2	
18	PRFA00032	Bolt, M16 x 130mm	6	
19	PRFA00068	Washer, Flat, M16	8	
20	PRPW00804	Mounting Base	1	
21	PRPW00548	Mounting Plate, rear hitch	3	
22	PRFA00069	Washer, Lock, M16	6	
23	PRFA00073	Nut, M16	6	
24	PRPW00805	Bracket	1	
25	PRFA00009	Washer, Flat, M8	2	
26	PRFA00033	Bolt, M8 x 20mm	2	
27	PRPW00647	Pin Assembly	2	
28	PRPW00648	Level Assembly	1	
29	PRFA00088	Pin	2	

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30	PRPW00651	Plate	1	
31	PRFA00137	Pin, Split Cotter, 4 x 25mm	4	



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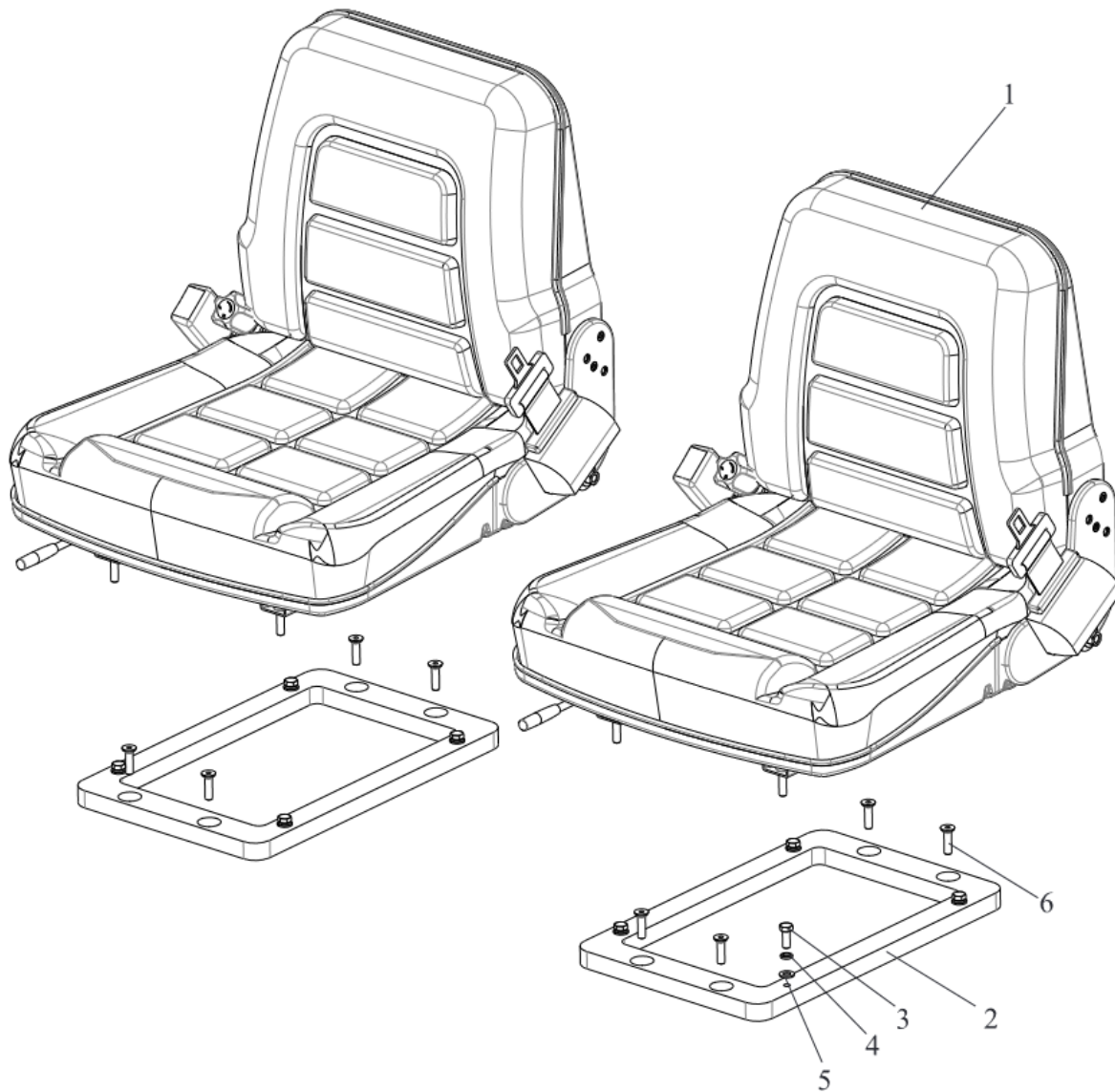


**Front Hitch – Exploded Parts View**

**Front Hitch – Spare Parts List**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>	<b>Remarks</b>
1	PRPW00652	Front Towing Pin Assembly	1	
2	PRPW00653	Adjusting Base	1	
3	PRFA00013	Bolt, M8 x 25mm	2	
4	PRFA00010	Washer, Lock, M8	2	
5	PRFA00009	Washer, Flat, M8	2	
6	PRPW00649	Pin Lock	1	
7	PRFA00089	Pin, 8 x 30mm	1	
8	PRFA00009	Washer, Flat, M8	1	
9	PRFA00105	Pin, Split Cotter, 2.5 x 20mm	1	
10	PRPW00654	Front Hitch	1	

# SEATS

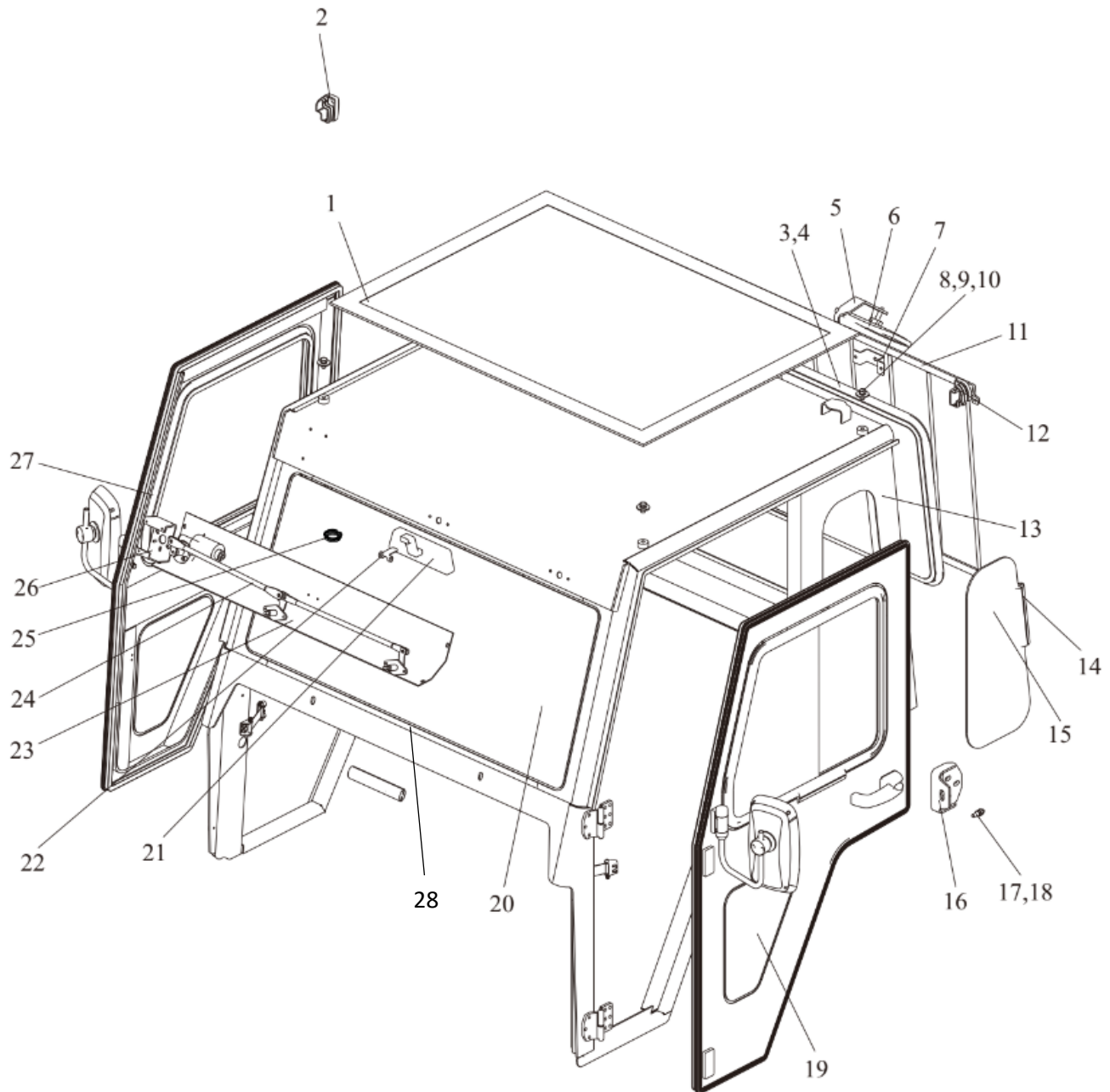


**Seats – Exploded Parts View**

**Seats – Spare Parts List**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>	<b>Remarks</b>
1	PRPW00655	Seat Assembly	2	
2	PRPW00657	Bracket	2	Reduced seat height
3	PRFA00033	Bolt, M8 x 20 mm	4	
4	PRFA00010	Washer, Lock, M8	32	
5	PRFA00009	Washer, Flat, M8	32	
6	PRFA00180	Bolt, M8 x 30 mm	4	

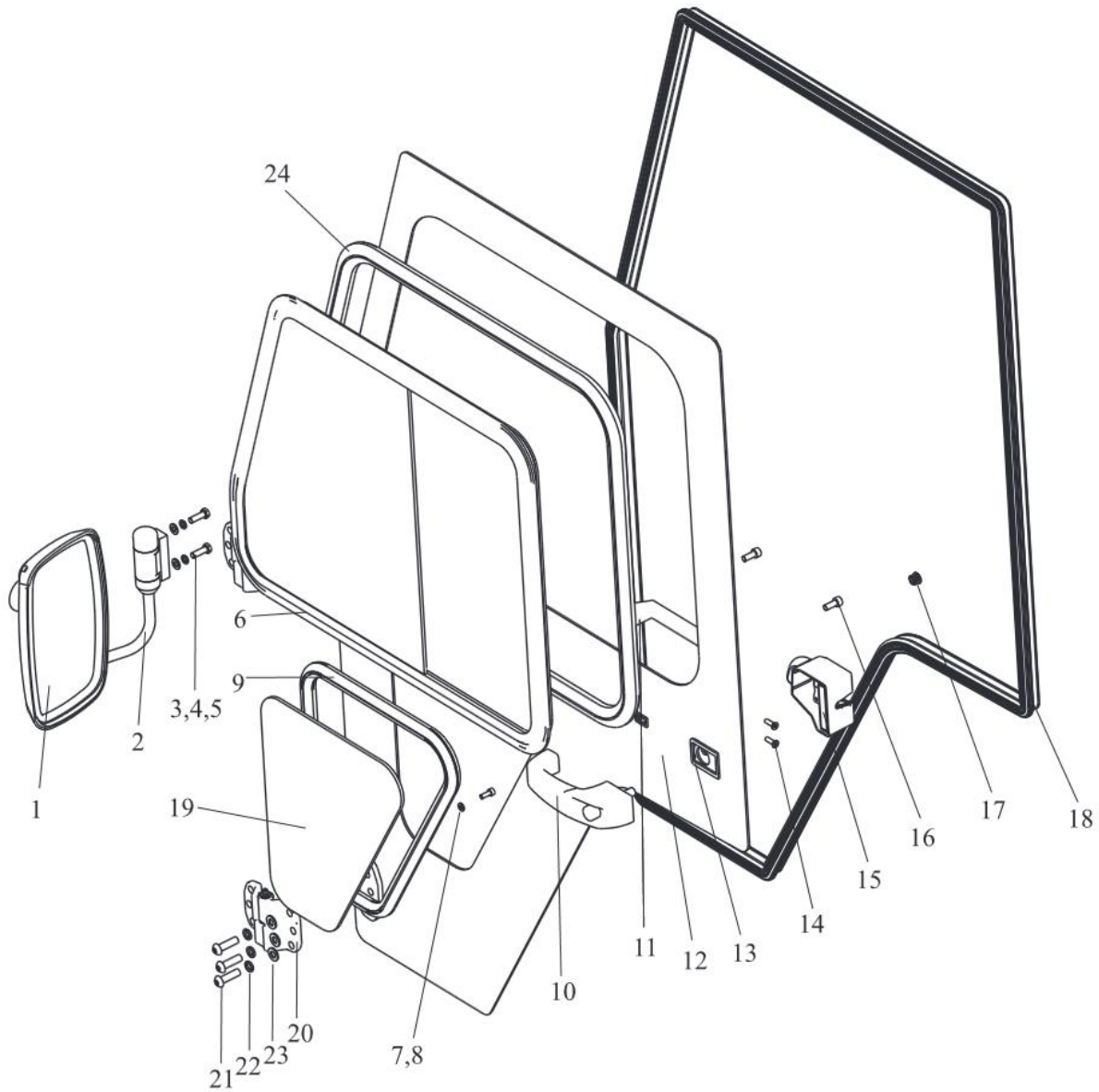
# CAB



**Cab Mounting - Exploded Parts View**

**Cab Mounting – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00658	Top Soft Package	1	
2	PRPW00659	Rear Cover	1	
3	PRPW02502	Rear Glass Rubber Gasket Seal	1	
4	PRPW00387	Rear Window	1	
5	PRPW00587	Rearview Mirror Stand	1	
6	PRPW00586	Reversing Mirror	1	
7	PRPW00660	Rear Light Stand	1	
8	PRFA00030	Washer, Flat, M12	4	
9	PRFA00034	Washer, Lock, M12	4	
10	PRFA00035	Bolt, M12 x 20	4	
11	PRPW00661	Rear Guardrail Assembly	1	
12	PRPW00662	Rear Cover	1	
13	PRPW00664	Cab Welding Assembly	1	
14	PRPW00364	Seal, Rear Side Glass	3	Set of 3
15	PRPW00202	Rear Window Glass	2	
16	PRPW00806	Bolt Support Welding	2	
17	PRPW00500	Latch Striker Bolt	2	
18	PRFA00036	Nut, M10	2	
19	PRPW00665	Left Door Installation	1	
20	PRPW00211	Windshield, Non Hinging	1	
21	PRPW00050	Rear View Mirror	1	
22	PRPW00667	Rear View Mirror Plate	1	
23	PRPW00668	Front Top Cover Plate	1	
24	PRPW00565	Wiper Assembly	1	
25	PRPW00670	Decorative Cover	4	
26	PRPW00671	Wiper Bracket	1	
27	PRPW00672	Right Door Installation	1	
28	PRPW02501	Front Glass Rubber Gasket Seal	1	

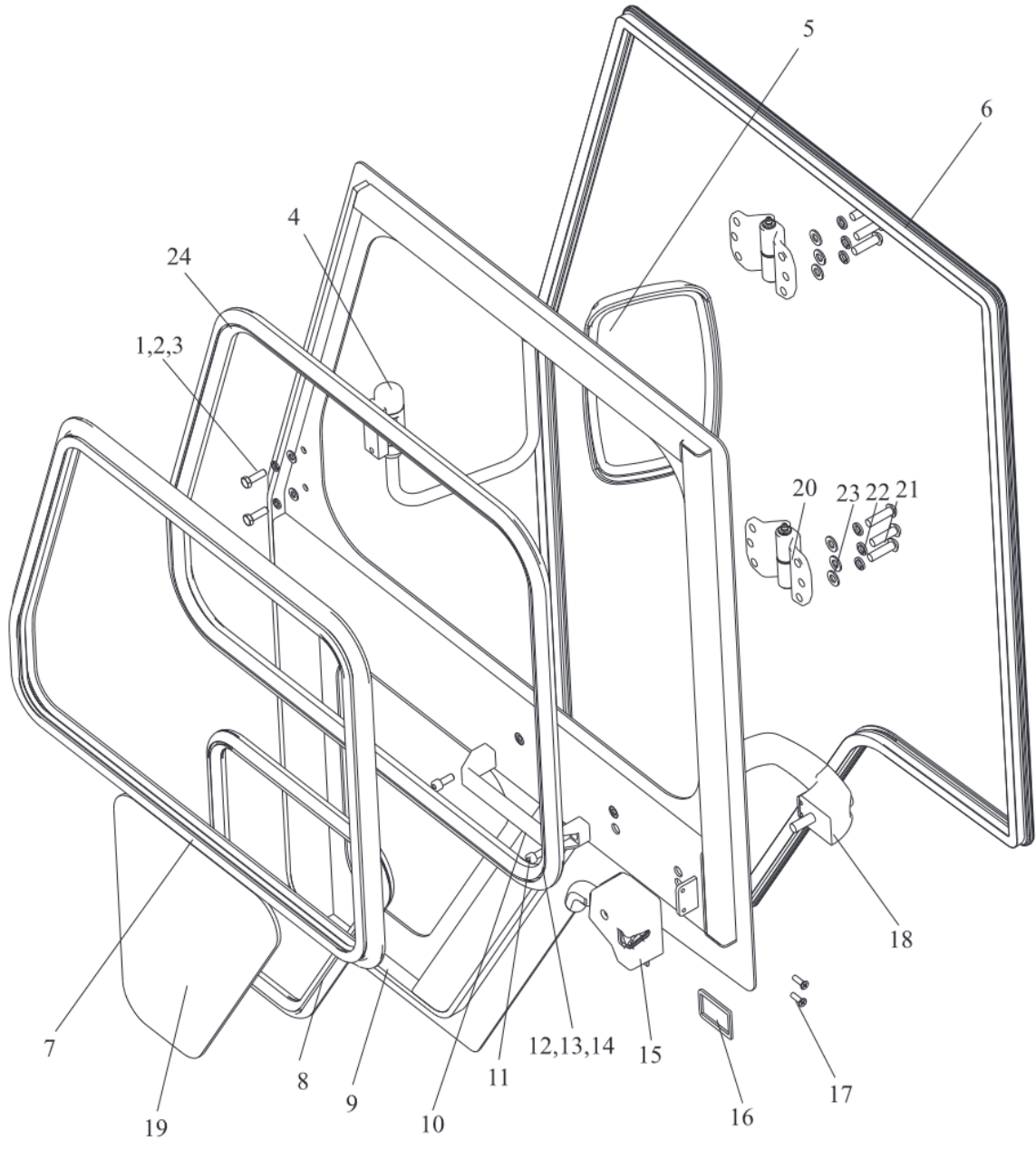


**Left Door - Exploded Parts View**



### Left Door – Spare Parts List

Item	Part No.	Description	Qty	Remarks
1	PRPW00043	Side Mirror – Exterior	1	
2	PRPW00045	Side Mirror Bracket	1	
3	PRFA00013	Bolt, M8 x 25 mm	2	
4	PRFA00010	Washer, Lock, M8	2	
5	PRFA00009	Washer, Flat, M8	2	
6	PRPW00216	Sliding Glass Assembly, Driver Side Door	1	
7	PRFA00006	Washer, Flat, M6	2	
8	PRFA00037	Screw, M6 x 16 mm	1	
9	PRPW00591	Seal, Lower Door Glass	1	
10	PRPW00046	Handle, Exterior	1	
11	PRPW00390	Handle Assembly	1	
12	PRPW00673	Door, Driver Side	1	
13	PRPW00824	Gasket	1	
14	PRFA00038	Screw, M6 x 20 mm	2	
15	PRPW00048	Interior Door Latch, Driver Side	1	
16	PRFA00022	Screw, M8 x 20 mm	2	
17	PRPW00674	Cover	1	
18	PRPW00418	Side Door Gasket Seal	1	
19	PRPW00389	Foot Window Glass	1	
20	PRPW02321	Door Hinge, D/S	1	
21	PRFA00175	Screw, M10 x 35 mm	6	
22	PRFA00010	Washer, Lock, 8	6	
23	PRFA00009	Washer, Flat, M8	6	
24	PRPW00388	Window Seal	1	

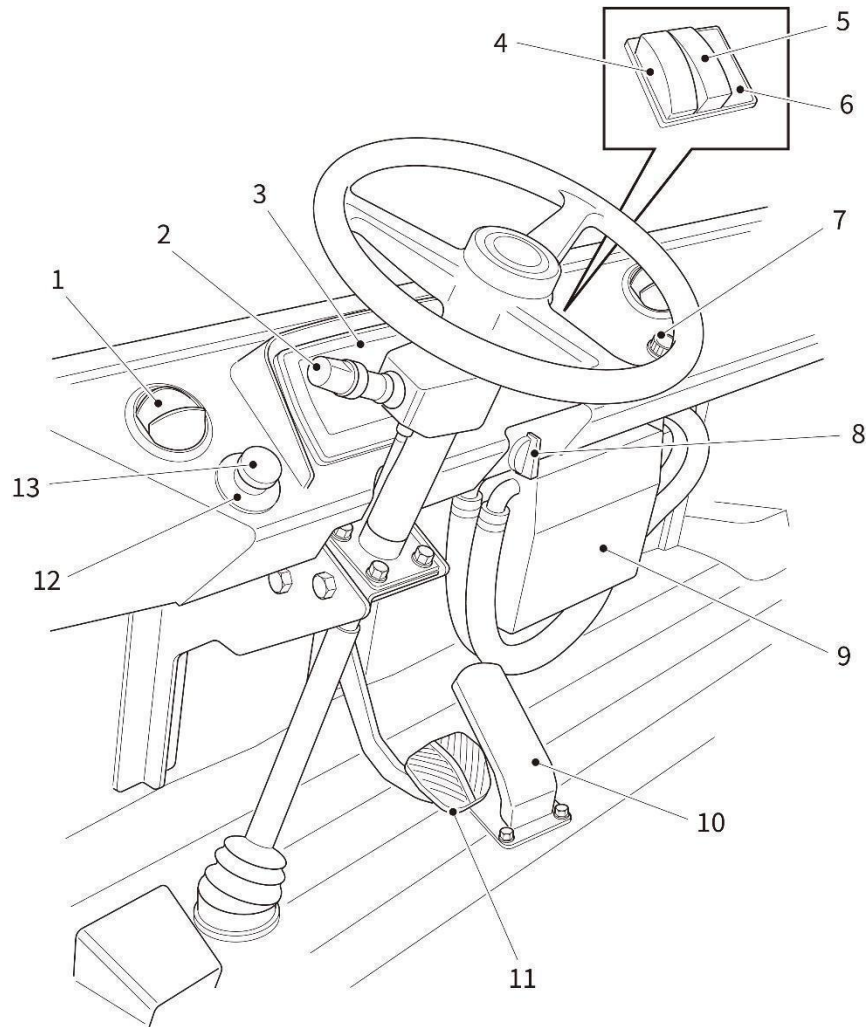


**Right Door - Exploded Parts View**

**Right Door – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRFA00009	Washer, Flat, 8	2	
2	PRFA00010	Washer, Lock, 8	2	
3	PRFA00013	Bolt, M8 x 25 mm	2	
4	PRPW00045	Side Mirror Bracket	1	
5	PRPW00043	Side Mirror – Exterior	1	
6	PRPW00418	Side Door Gasket Seal	1	
7	PRPW00217	Sliding Window (Right)	1	
8	PRPW00591	Seal, Lower Door Glass	1	
9	PRPW00217	Right Door Welding	1	
10	PRPW00390	Handle Assembly	1	
11	PRFA00022	Screw, M8 x 20 mm	2	
12	PRPW00674	Cover	1	
13	PRFA00037	Screw, M6 x 16 mm	1	
14	PRFA00006	Washer, Flat, M6	1	
15	PRPW00047	Interior Door Latch, Passenger Side	1	
16	PRPW00824	Gasket	1	
17	PRFA00038	Screw, M6 x 20 mm	2	
18	PRPW00046	Handle, Exterior	1	
19	PRPW00389	Glass, Lower Door	1	
20	PRPW02322	Door Hinge, P/S	1	
21	PRFA00175	Screw M10 x 35 mm	6	
22	PRFA00010	Washer, Lock, 8	6	
23	PRFA00009	Washer, Flat, M8	6	
24	PRPW00388	Window Seal	1	

# CONTROLS AND INSTRUMENTS

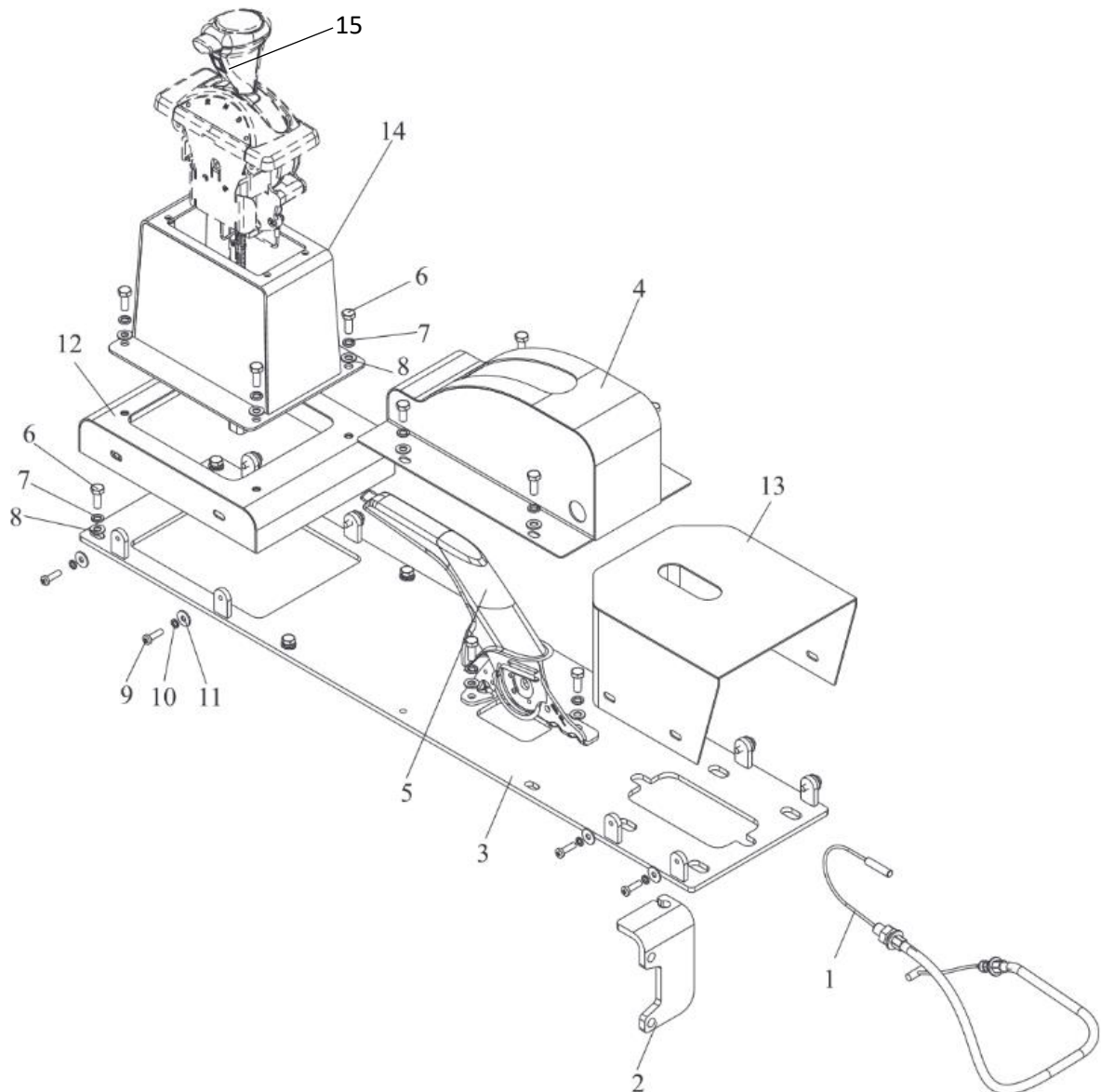


**Controls and instruments - Exploded Parts View**

### Controls and instruments – Spare Parts List

Item	Part No.	Description	Qty	Remarks
1	PRPW01451	Air vent	4	
2	PRPW00225	Turn Signal/Headlamp Control	1	
3	PRPW00408	Dash Display Screen	1	
4	PRPW00677	Switch, Rear Working Light	1	
5	PRPW00678	Switch, Windscreen Wiper	1	Only on version with Cab
6	PRPW00507	Plastic Blank Cover	1 or 2	Qty 1 if Cab Qty 2 if no Cab
7	PRPW02283	Heater Switch, Rotary	1	For Cab heater
8	PRPW00051	Keyless Ignition Switch	1	
9	PRPW02374	Heater	1	Only on version with Cab
10	PRPW00616	Accelerator pedal	1	
11	PRPW00679	Brake Pedal Assembly	1	
Not shown	PRPW00680	Footbrake Switch	1	Part of the Brake Pedal Assembly
12	PRPW00681	Label, Emergency Stop Switch	1	
13	PRPW00041	EMERGENCY STOP switch	1	

## PARKING BRAKE CONTROL

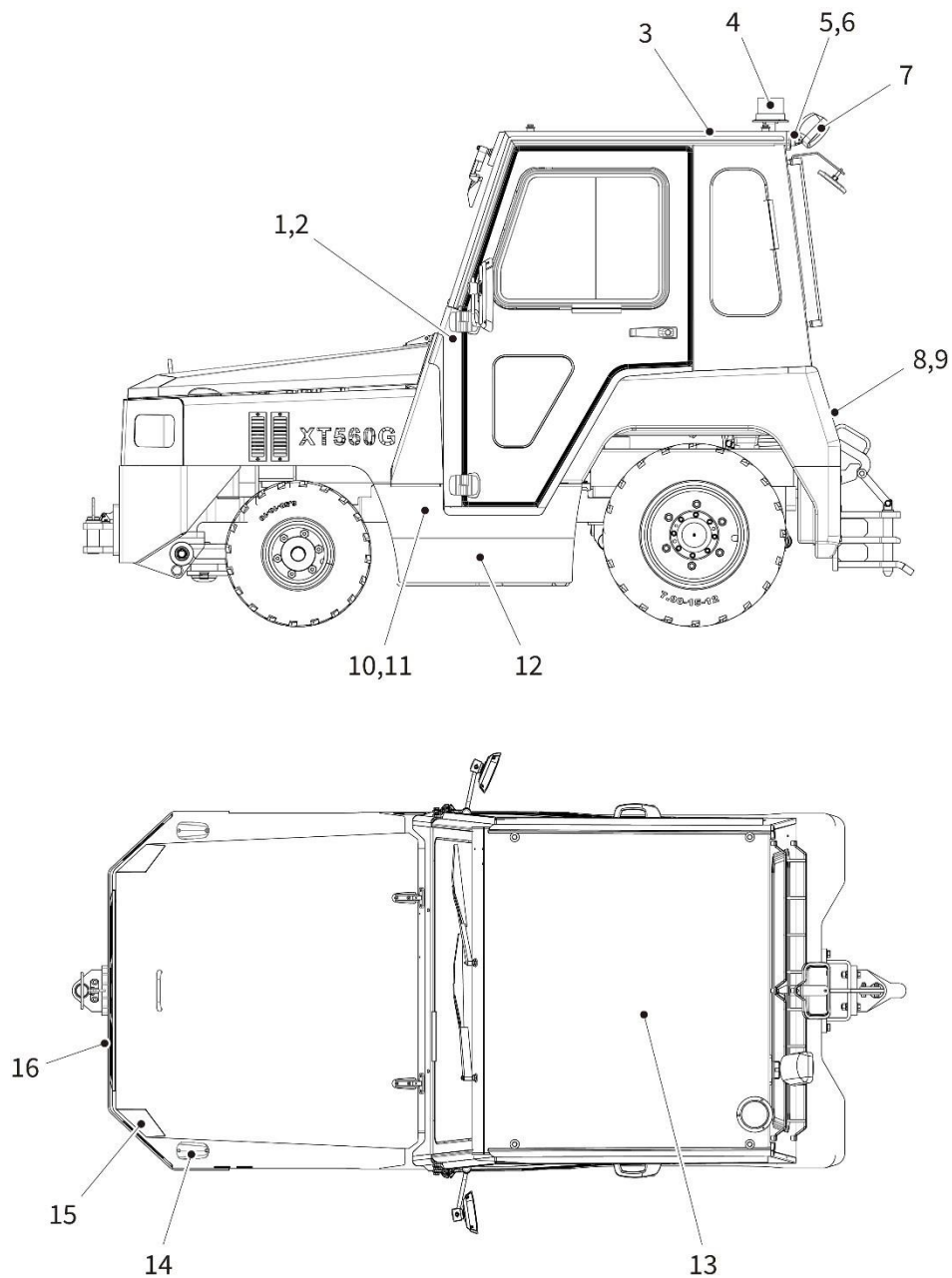


**Parking Brake Control - Exploded Parts View**

**Parking Brake Control – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW02222	Park Brake Cable	1	Brilliance Drive Axle
2	PRPW03345	Hand Brake Bracket	1	
3	PRPW00713	Backplate Assembly	1	
4	PRPW00714	Casing	1	
5	PRPW00545	Park Brake Lever	1	
6	PRFA00033	Bolt, M8 x 20mm	12	
7	PRFA00009	Washer, Flat, M8	12	
8	PRFA00010	Washer, Lock, M8	12	
9	PRFA00038	Screw, M6 x 20mm	9	
10	PRFA00007	Washer, Lock, M6	9	
11	PRFA00006	Washer, Flat, M6	9	
12	PRPW00687	Shifter Mounting Plate Assembly	1	
13	PRPW00715	Case (NOTE: There are two different designs of this item. The upper one shown in the Exploded Parts View is a form, fit and function replacement for the lower one)	1	
14	PRPW00688	Shifter Mounting Plate Assembly	1	
15		Transmission Shift Control	1	See page 20, 21

# ELECTRICAL SYSTEM

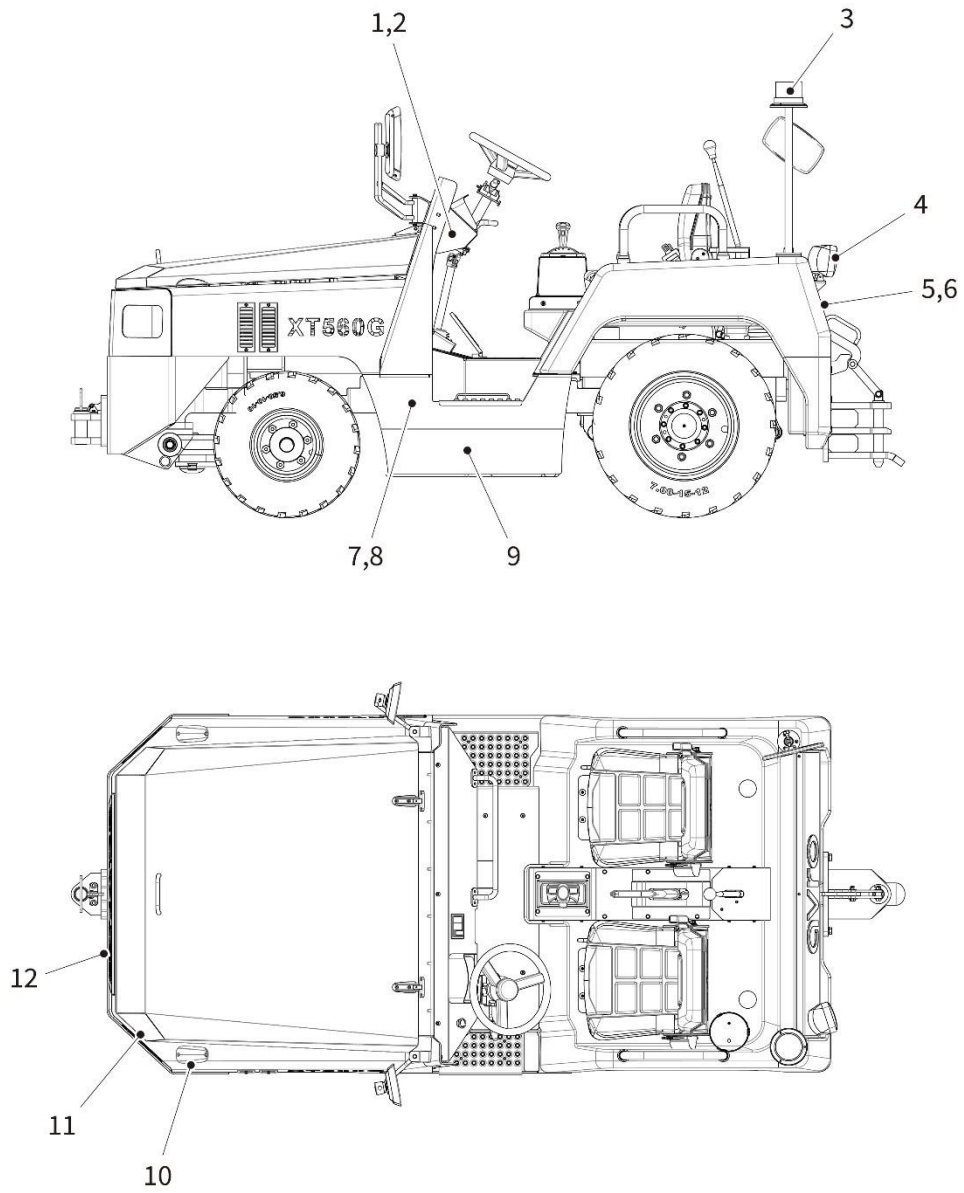


**Electrical system (with cab) - Exploded Parts View**



**Electrical System (with cab) – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00689	Centre Frame, Switch Mount	1	
2	PRPW00690	End Frame, Switch Mount	2	
3	PRPW00691	Tractor Cabin Harness	1	
4	PRPW00692	Beacon	1	
5	PRPW00693	Turn Indicator	2	
6	PRPW00044	Cab Brake Light	1	
7	PRPW00436	Rear Work Light	1	
8	PRPW00055	Taillight	2	
9	PRPW00694	Reverse Alarm	1	
10	PRPW00695	Speed Sensor	1	On Transmission output shaft
11	PRPW00590	Sensor, Transmission oil temperature	1	On Transmission
12	PRPW00375	Fuel Level Sensor	1	On fuel tank
13	PRPW00696	Interior Light	1	
14	PRPW00497	Front Signal Light	2	
15	PRPW00053	Headlamp Assembly	2	
16	PRPW00697	Horn	1	

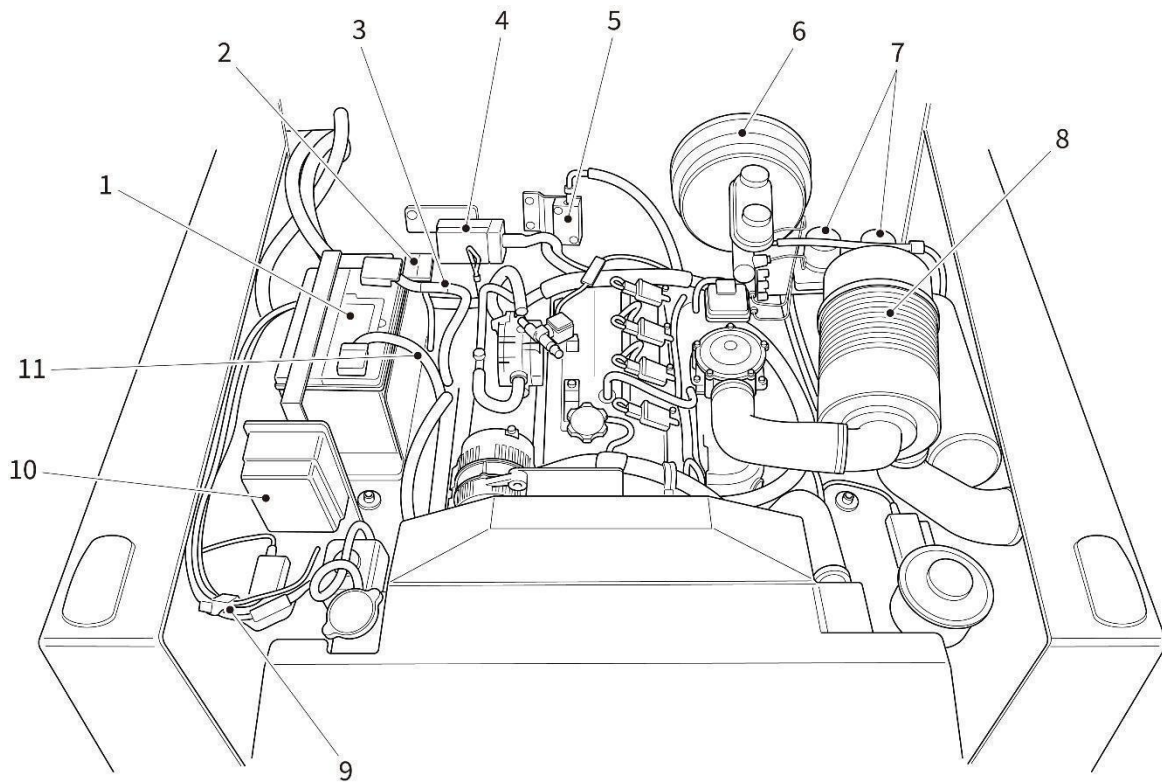


**Electrical system (without cab) - Exploded Parts View**

**Electrical System (without cab) – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00689	Centre Frame, Switch Mount	1	
2	PRPW00690	End Frame, Switch Mount	2	
3	PRPW00692	Beacon	1	
4	PRPW00436	Rear Work Light	1	
5	PRPW00055	Taillight	2	
6	PRPW00694	Reverse Alarm	1	
7	PRPW00695	Speed Sensor	1	On Transmission output shaft
8	PRPW00590	Sensor, Transmission oil temperature	1	On Transmission
9	PRPW00375	Fuel Level Sensor	1	On fuel tank
10	PRPW00497	Front Signal Light	2	
11	PRPW00053	Headlamp Assembly	2	
12	PRPW00697	Horn	1	

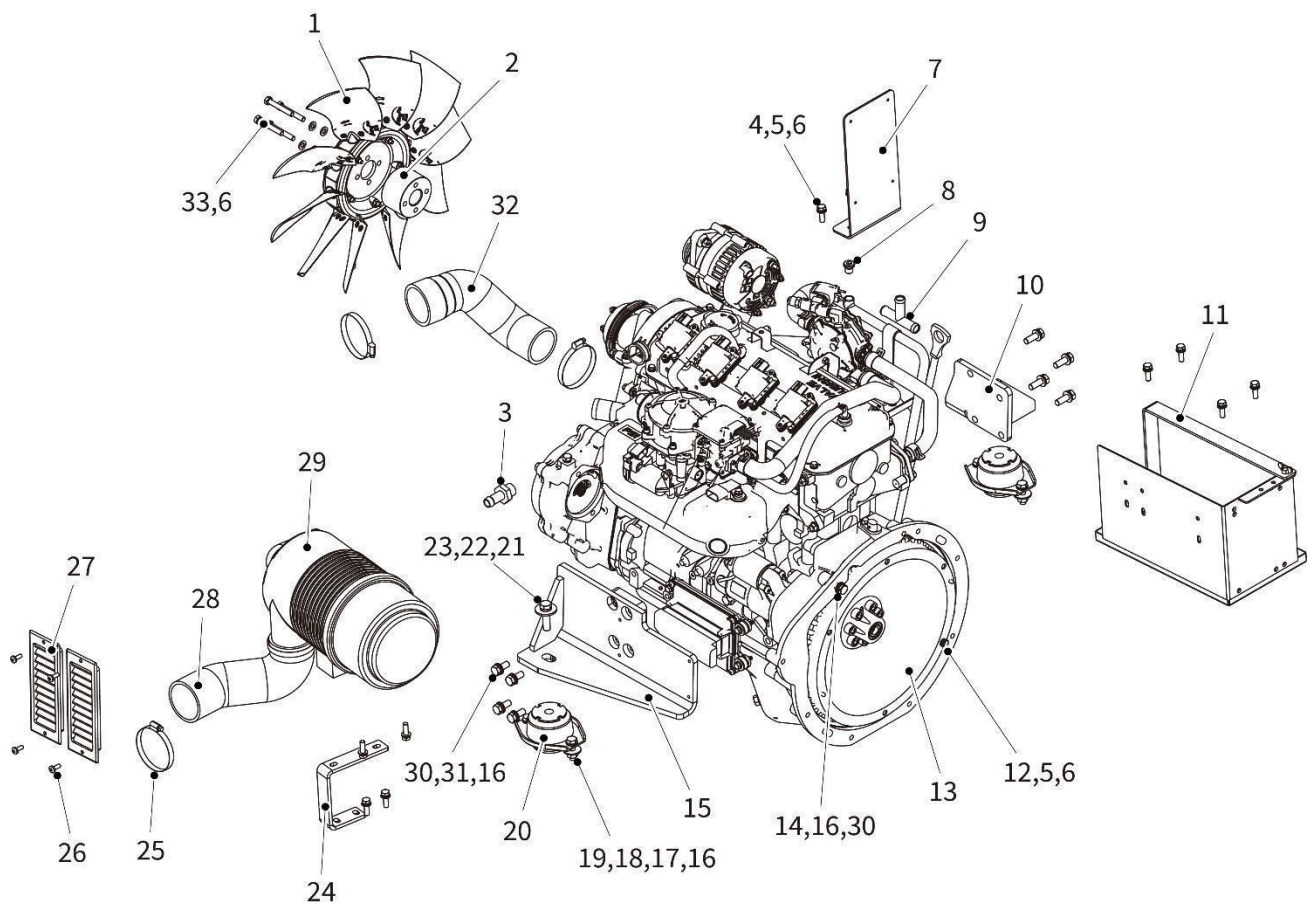
# ENGINE MOUNTING



**Engine Compartment- Exploded Parts View**

**Engine compartment – Spare Parts List**

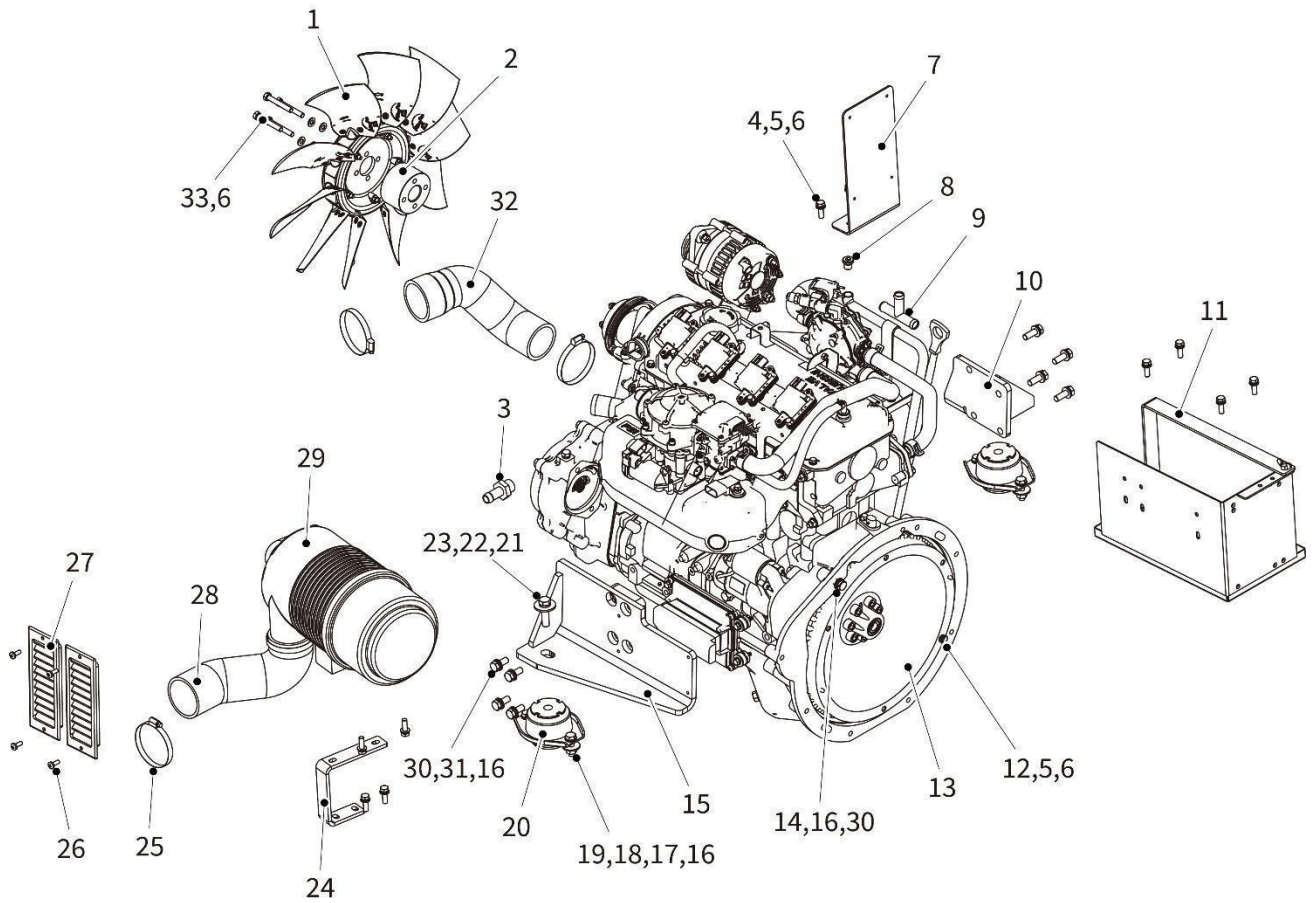
Item	Part No.	Description	Qty	Remarks
1	PRPW00698	Battery	1	
2	PRPW00116	Battery Connector with Fusible Links	1	
3	PRPW00700	Positive Battery Cable	1	
4	N/A	Engine Harness Fuse Box - PSI	1	Part of main engine wiring harness
5	See line item #19, page 132 – Fuel System		1	
6	See line item #27, page 133 – Braking system		1	
7	See line item #30, page 133 – Braking system		1	
8	PRPW00419	Air Filter Element (Expected Life 300 to 500 hrs, depending on conditions)	1	Air Filter Element located inside Air Cleaner (shown)
9	PRPW00701	Vehicle Wiring Harness	1	With Cab
	PRPW00702	Vehicle Wiring Harness	1	Without Cab
10	PRPW00415	Center Control Box	1	
11	PRPW00703	Negative Battery Cable	1	
Not shown	N/A	ATM Mini-Fuse, 10 Amp (located inside Central Control Box)	8	Purchase locally
Not shown	N/A	ATM Mini-Fuse, 15 Amp (located inside Central Control Box)	1	Purchase locally
Not shown	N/A	ATM Mini-Fuse, 30 Amp (located inside Central Control Box)	1	Purchase locally



**Engine Mounting - Exploded Parts View**

**Engine Mounting – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00704	Radiator Fan	1	
2	PRPW00705	Fan Block	1	
3	PRPW00716	Heater Hose Connector	1	Required for heater
4	PRFA00013	Bolt, M8 x 25mm	10	
5	PRFA00010	Washer, Lock, M8	10	
6	PRFA00009	Washer, Flat, M8	14	
7	PRPW00706	Control Box Stand	1	
8	PRPW00717	Plug	1	
9	PRPW00718	Tee Fitting	1	Required for heater
10	PRPW00719	Engine Mounting Bracket, Right	1	
11	PRPW00720	Battery Box	1	
12	PRFA00033	Bolt, M8 x 20mm	12	
13	PRPW00721	Engine	1	
14	PRFA00040	Bolt, M10 x 35mm, 1.25mm pitch	9	
15	PRPW00722	Engine Mounting Bracket, Left	1	
16	PRFA00011	Washer, Flat, M10	12	
17	PRFA00036	Nut, M10	4	
18	PRFA00041	Gasket, M10	4	
19	PRFA00026	Bolt, M10 x 35mm	8	
20	PRPW00723	Shock Absorber	2	
21	PRFA00030	Washer, Flat, M12	2	
22	PRFA00034	Washer, Lock, M12	2	
23	PRFA00042	Bolt, M12 x 35mm	2	
24	PRPW00724	Air Filter Stand	1	
25	PRPW00877	Clamp, Hose, 80 x 60 mm	4	
26	PRFA00037	Screw, M6 x 16mm	4	
27	PRPW00725	Air Intake Cover	2	
28	PRPW00726	Air Intake Hose	1	



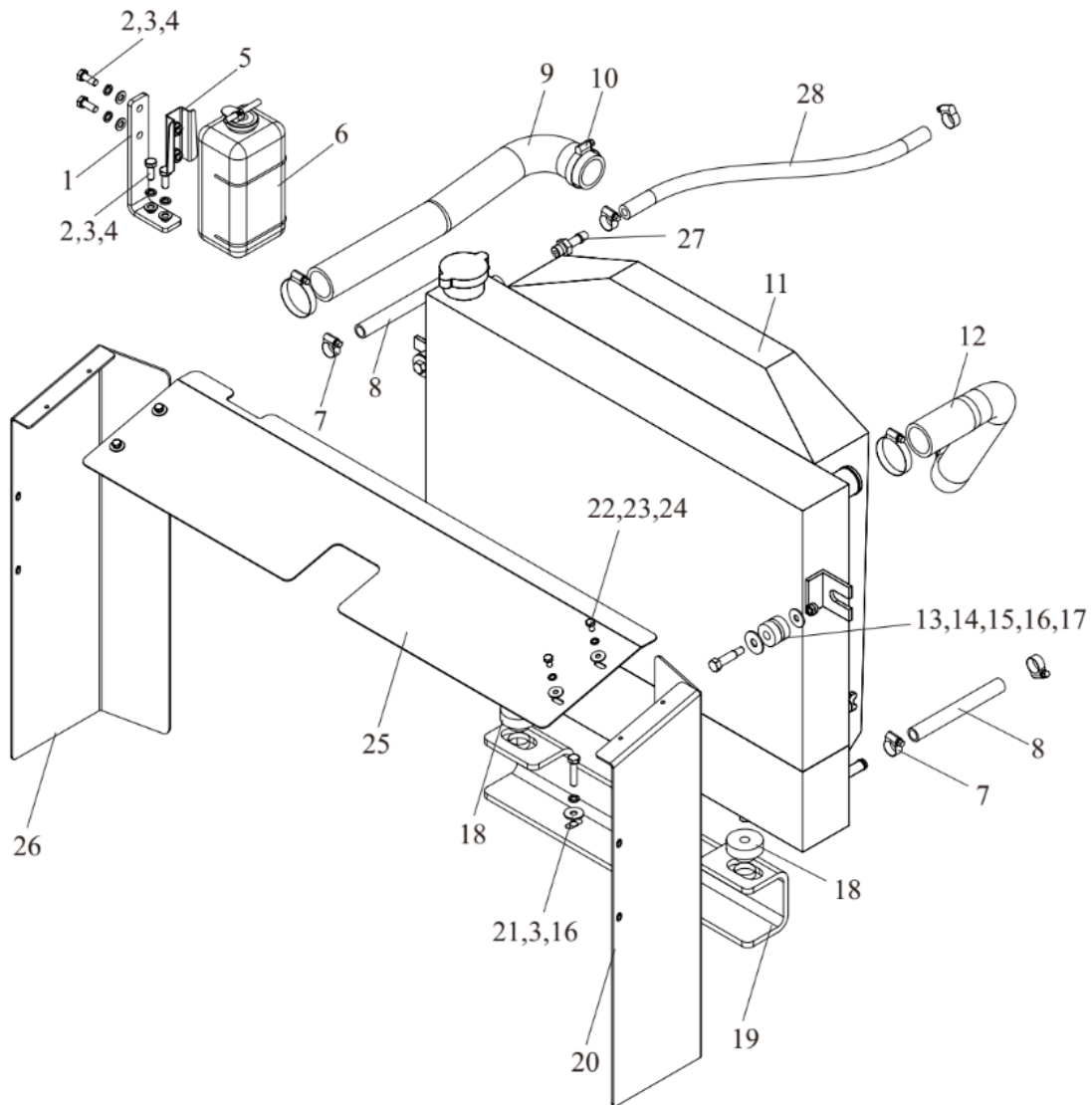
**Engine Mounting – Exploded Parts View**



**Engine Mounting – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
29	PRPW00419	Air Filter Element	1	Internal replaceable item
30	PRFA00012	Washer, Lock, M10	12	
31	PRFA00008	Bolt, M10 x 30mm	4	
32	PRPW00728	Air Intake Hose	1	
33	PRFA00044	Bolt, M8 x 70mm	4	

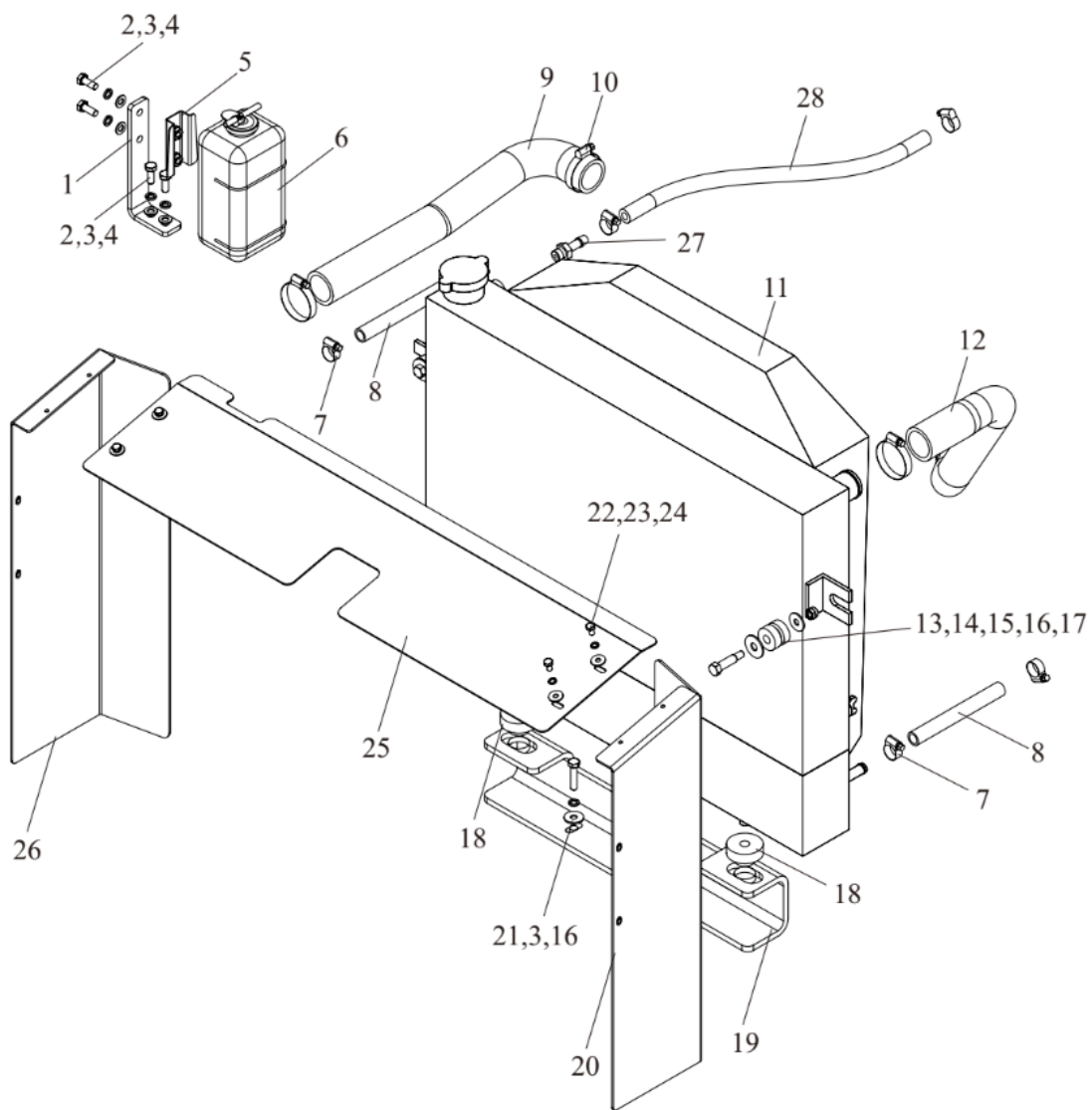
# COOLING SYSTEM



**Cooling System – Exploded Parts View**

**Cooling System – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00729	Expansion Tank Bracket	1	
2	PRFA00009	Washer, Flat, 8	4	
3	PRFA00010	Washer, Lock, 8	6	
4	PRFA00033	Bolt, M8 x 20 mm	4	
5	PRPW00730	Expansion Tank Mounting Clip	1	
6	PRPW00731	Expansion Tank	1	
7	PRPW00878	Hose Clamp, 20 x 12 mm	4	
8	PRPW00737	Hose, Low Pressure, 13 x 1500mm	2	
0	PRPW00068	Down Hose	1	
10	PRPW00900	Hose Clamp, 51 x 35mm	4	
11	PRPW00240	Radiator	1	
12	PRPW00067	Upper Radiator Hose	1	
13	PRFA00045	Washer, Special	2	
14	PRFA00046	Bolt, Special	2	
15	PRPW00736	Anti-vibration Mount, Radiator	2	
16	PRFA00009	Washer, Flat, M8	2	
17	PRFA00186	Nut, Self-locking, M8	2	
18	PRPW00733	Rubber Mounting	2	
19	PRPW00732	Radiator Support Bracket	1	
20	PRPW00734	Seal Plate, Left	1	
21	PRFA00047	Bolt, M8 x 35 mm	2	
22	PRFA00014	Bolt, M6 x 10 mm	8	

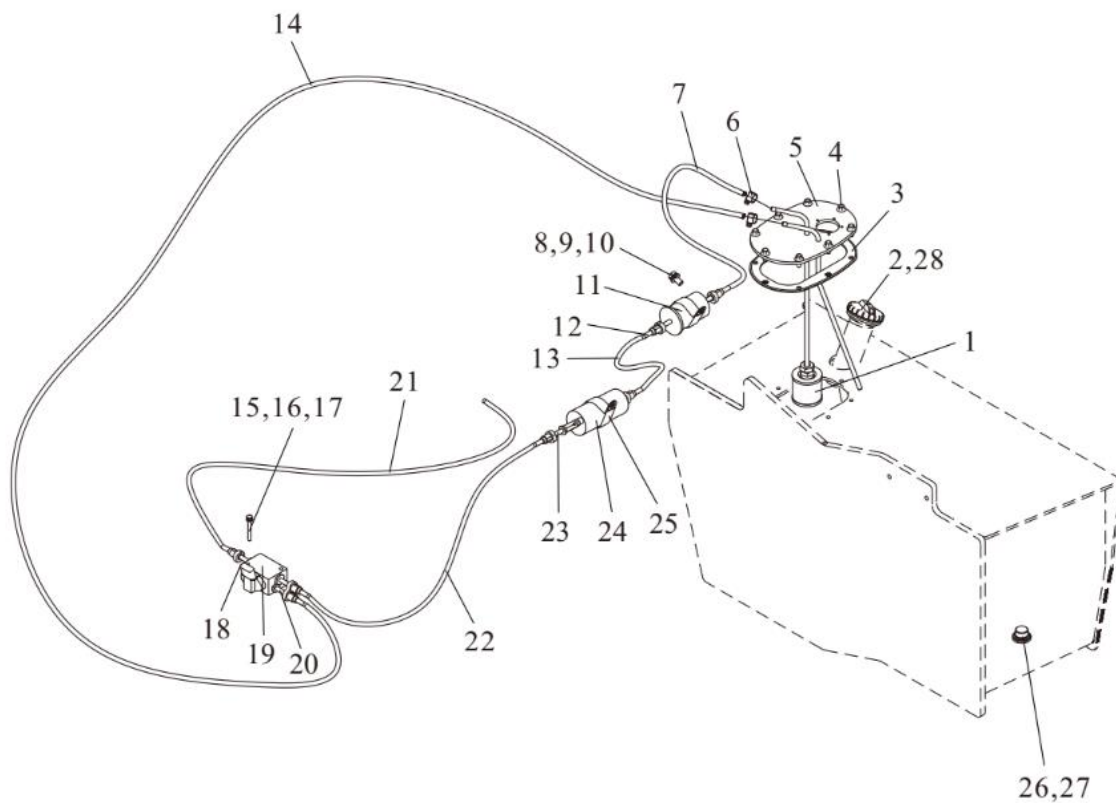


**Cooling System – Exploded Parts View**

**Cooling System – Spare Parts List**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>	<b>Remarks</b>
23	PRFA00006	Washer, Flat, M6	8	
24	PRFA00006	Washer, Flat, M6	8	
25	PRPW00735	Cover Plate	1	
26	PRPW00738	Right Seal Plate	1	
27	PRPW02908	Connector, Hydraulic, Straight	1	

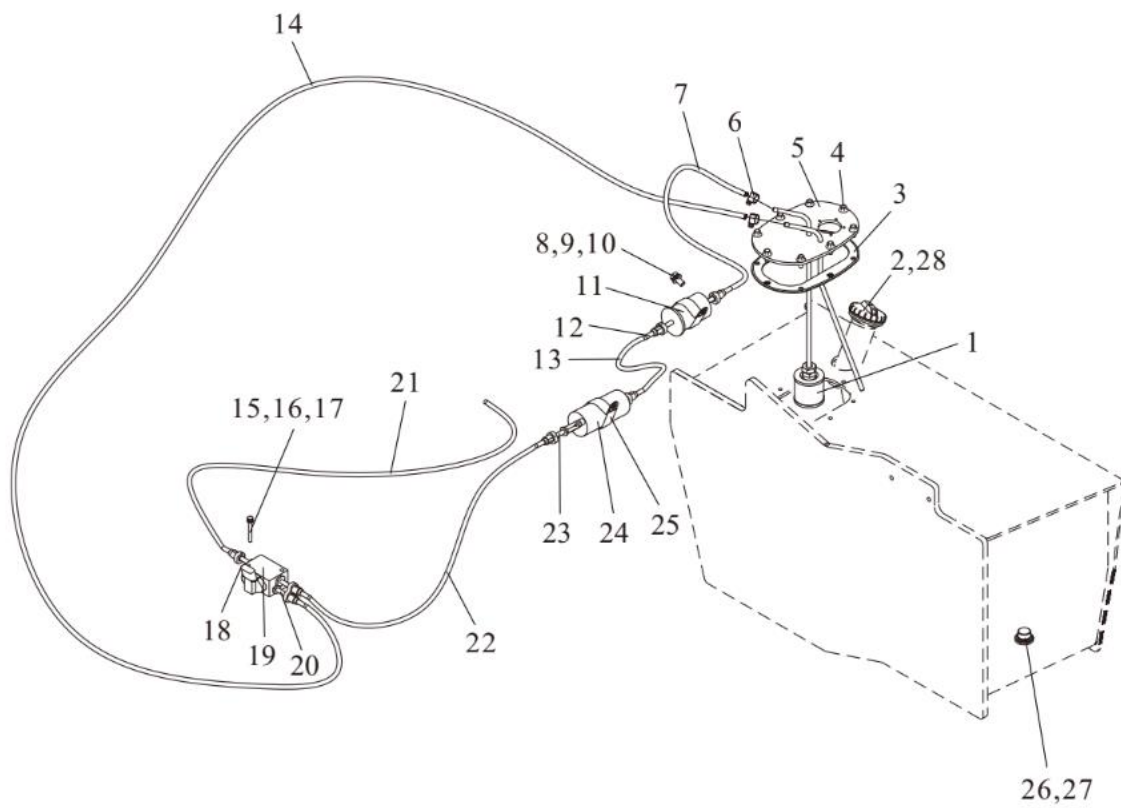
# FUEL SYSTEM



**Fuel System – Exploded Parts View**

**Fuel System – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00070	Fuel pre-filter, in-tank	1	
2	PRPW02761	Fuel Cap	1	
3	PRPW00740	Sealing Gasket	1	
4	PRFA00024	Screw, M8 x 16 mm	10	
5	PRPW00741	Fuel Tank Cover	1	
6	PRPW00879	Clip, Hose, 16 x 10mm	2	
7	PRPW00953	Fuel Hose, Asm 31" 90 Deg Tank 30R12	1	Included with engine
8	PRFA00130	Bolt, M6 x 12 mm	2	
9	PRFA00011	Washer, Flat, M10	2	
10	PRFA00012	Washer, Lock, M10	2	
11	PRPW00307	Fuel Filter	1	Included with engine
12	PRPW00913	Connector	1	Included with engine
13	PRPW00066	Fuel Pump	1	Included with engine
14	PRPW00952	Fuel Hose, Tank Return	1	Included with engine
15	PRFA00007	Washer, Lock, M6	2	
16	PRFA00006	Washer, Flat, M6	2	
17	PRFA00189	Bolt, M10 x 20mm	2	
18	PRPW00894	FITTING, DUAL FUEL	2	Included with engine
19	PRPW02901	Solenoid Valve	1	Included with engine



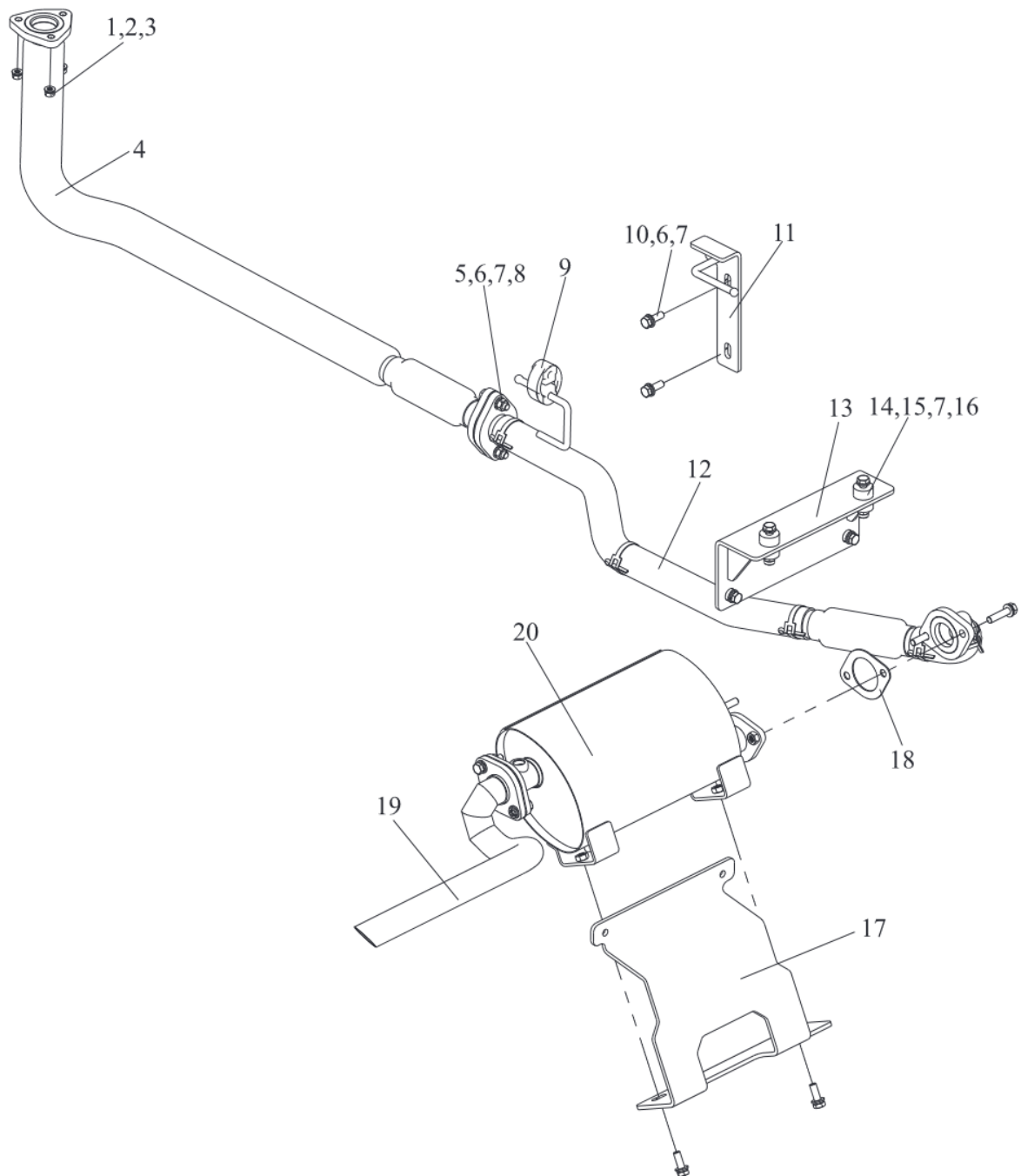
### Fuel System – Exploded Parts View



**Fuel System – Spare Parts List**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>	<b>Remarks</b>
20	PRPW00895	Connector, manifold	2	Included with engine
21		Tube, 5	1	Included with engine
22		Tube, 4	1	Included with engine
23	PRPW00744	Right Angle Fast Connector	2	
24	PRPW00743	Fuel Filter	1	Included with engine
25	PRPW01325	Clamp	2	Included with engine
26	PRPW00751	Oil Drain Plug	1	
27	PRPW02277	Seal, 26mm	1	Included with oil drain plug

# EXHAUST SYSTEM



**Exhaust System – Exploded Parts View**

**Exhaust System – Spare Parts List**

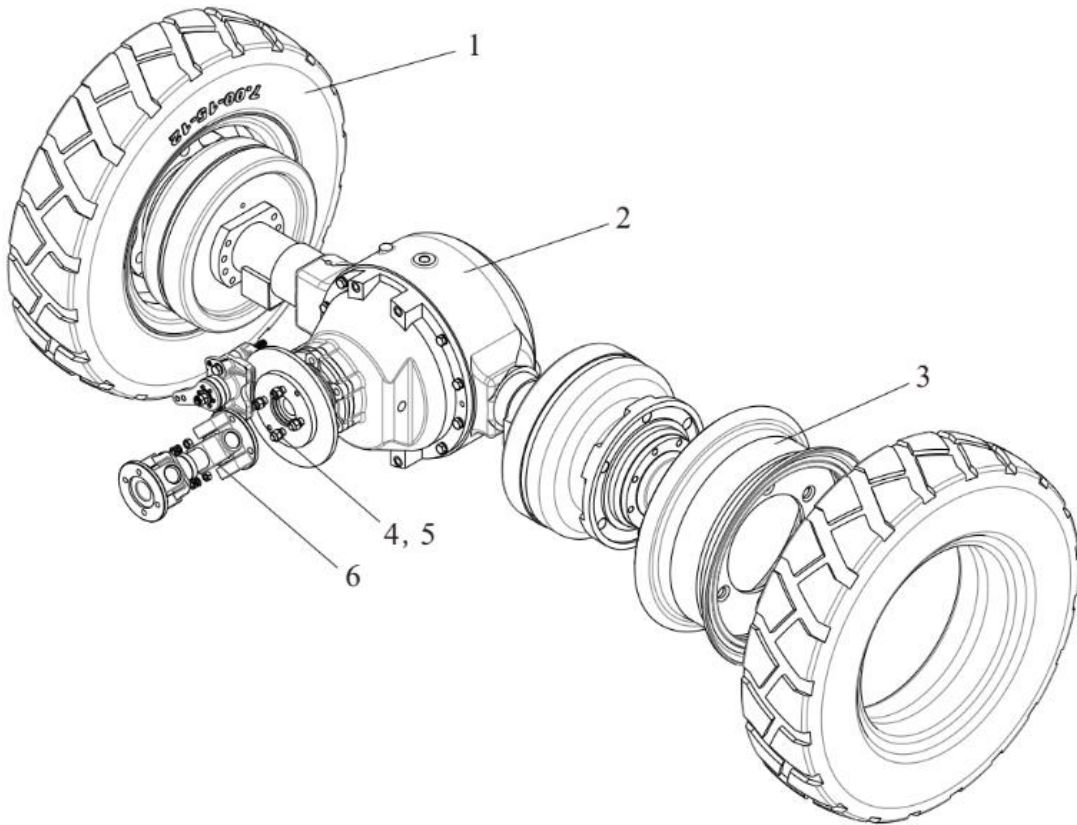
<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>	<b>Remarks</b>
1	PRFA00021	Nut, M8	3	
2	PRFA00010	Washer, Lock, M8	3	
3	PRFA00009	Washer, Flat, M8	3	
4	PRPW00256	Front exhaust Pipe	1	
5	PRFA00159	Bolt, M10 x 45mm	6	
6	PRFA00011	Washer, Flat, M10	18	
7	PRFA00012	Washer, Lock, M10	12	
8	PRFA00036	Nut, M10	2	
9	PRPW00758	Exhaust Rubber Mounting	1	
10	PRFA00008	Bolt, M10 x 30mm	6	
11	PRPW03350	Hook Assembly	1	
12	PRPW03352	Middle Exhaust Pipe assembly	2	
13	PRPW03353	Upper Bracket Assembly	1	
14	PRPW00760	Rubber Mounting	2	
15	PRFA00349	Bolt, M10 x 60mm	2	
16	PRFA00036	Nut, M10	2	
17	PRPW03354	Mounting Bracket	1	
18	PRPW03355	II Gasket	3	
19	PRPW03356	Rear Exhaust Pipe Assembly	1	
20	PRPW03357	Three-way Catalyst Converter & Silencer	1	



**Automatic Transmission Mounting – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00241	Gearbox, Y43300X	1	
2	PRPW00878	Clamp, Hose, 20 x 12 mm	2	
3	PRPW00764	Hose Connector, Transmission Oil Cooler line	2	
4	PRFA00050	Bolt, M16 x 1.5 x 35	8	
5	PRFA00069	Washer, Lock, M16	8	
6	PRFA00068	Washer, Flat, M16	8	
7	PRPW00765	Gear Box Right Mounting Bracket	1	
8	PRFA00012	Washer, Lock, M10	6	
9	PRFA00036	Nut, M10	4	
10	PRFA00011	Washer, Flat, M10	6	
11	PRFA00011	Washer, Flat, M10	4	
12	PRFA00026	Bolt, M10 x 35 mm	6	
13	PRPW00767	Gearbox Mounting	2	
14	PRPW00766	Gear Box Left Mounting Bracket	1	

# DRIVETRAIN

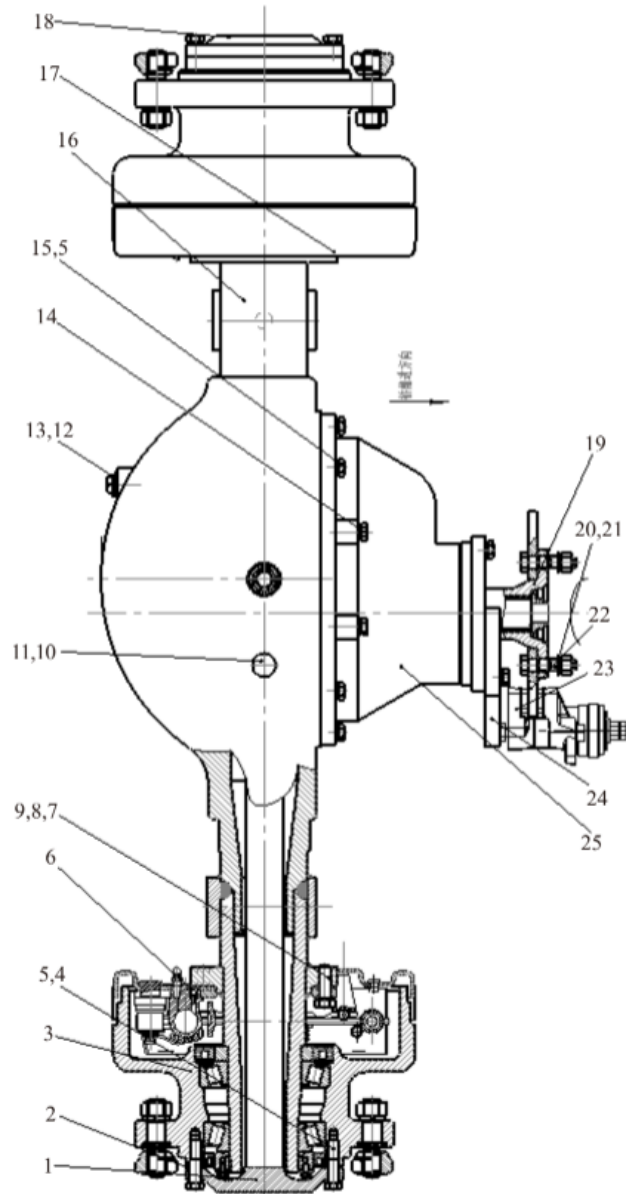


**Drive System - Exploded Parts View**

**Drive System – Spare Parts List**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>	<b>Remarks</b>
1	PRPW00226	Tire, 7.00-15-12PR	2	
2	PRPW02544	Drive Axle	1	
3	PRPW00227	Rear wheel Assembly	2	
4	PRFA00036	Nut, M10	4	
5	PRFA00030	Washer, Flat, M12	4	
6	PRPW03322	Transmission Shaft Assembly	1	

# AXLE

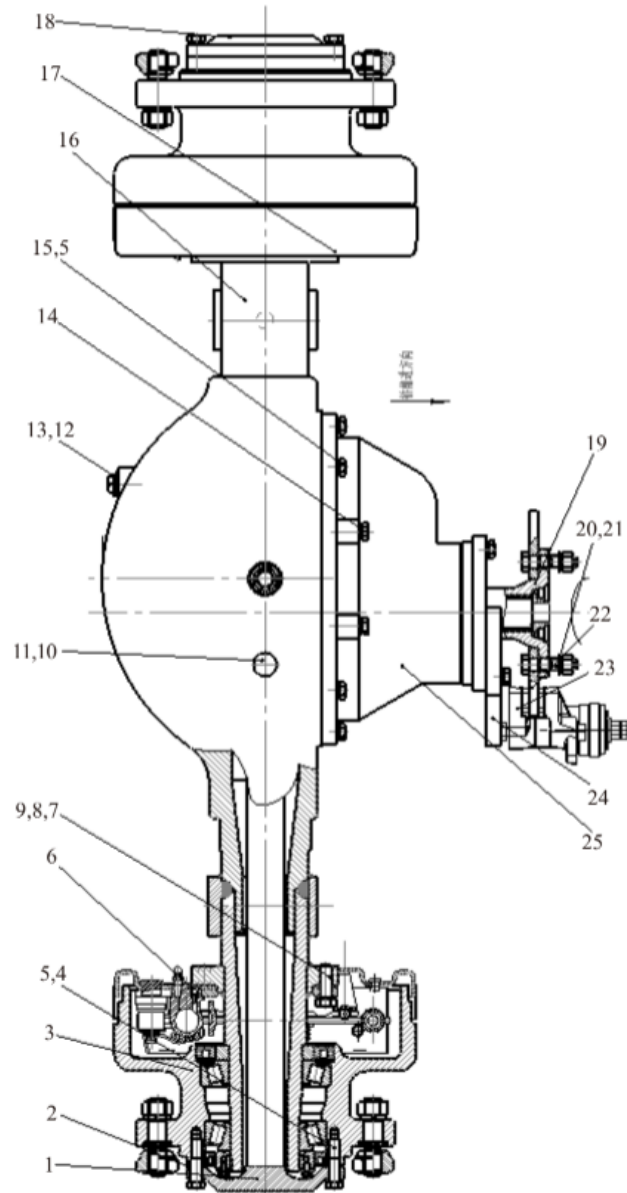


**Drive Axle - Exploded Parts View**



### Drive Axle – Spare Parts List

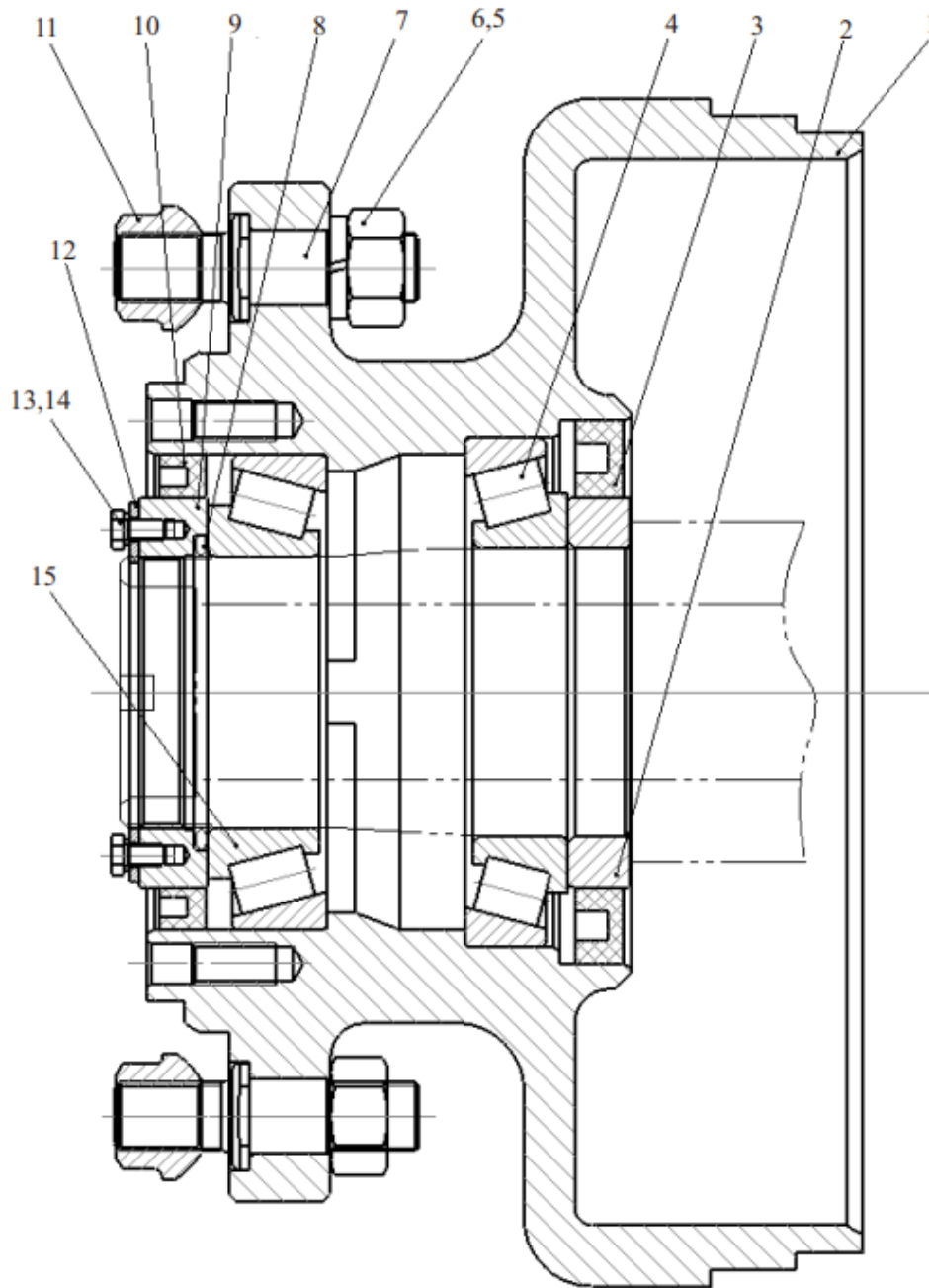
Item	Part No.	Description	Qty	Remarks
1	PRPW02537	Left Half Axis	1	
2	PRPW02538	Half Axle Paper Pad	2	
3	PRPW02539	Wheel Rim Assembly	2	
4	PRFA00197	Bolt, M12 × 1.25 × 50 mm	24	
5	PRFA00034	Washer, Lock, 12	36	
6	PRPW02540	Rear Brake Assembly, P/S	1	
7	PRFA00066	Bolt, M14 × 1.5 × 40	12	
8	PRFA00198	Bolt, M12 x 1.25 x 40 mm, Special	4	
9	PRFA00118	Washer, Lock, M14	20	
10	PRPW02541	Vent Plug Seat	1	
11	PRPW02542	Vent Plug	1	
12	PRFA00199	Screw Plug, M20 × 1.5	3	
13	PRPW02543	Combined Washer, 20	3	
14	PRFA00341	Bolt, M12 × 65 mm	4	
15	PRFA00042	Bolt, M12 x 35 mm	8	
16	PRPW02544	Drivel Axle	1	
17	PRPW02545	Rear Brake Assembly, D/S	1	
18	PRPW02546	Right Half Axis	1	
19	PRFA00201	Flange	1	
20	PRFA00202	Bolt, M14 × 1.5 × 55mm	4	



**Drive Axle - Exploded Parts View**

**Drive Axle – Spare Parts List**

<b>Item</b>	<b>Part No.</b>	<b>Description</b>	<b>Qty</b>	<b>Remarks</b>
21	PRFA00234	Nut, M14	4	
22	PRPW02547	Hand Brake Disc	1	
23	PRPW02208	Park Brake Caliper Assembly, c/w pads	1	
24	PRPW02548	Brake Caliper Bracket	1	
25	PRPW02549	Main Reducer Assembly	1	

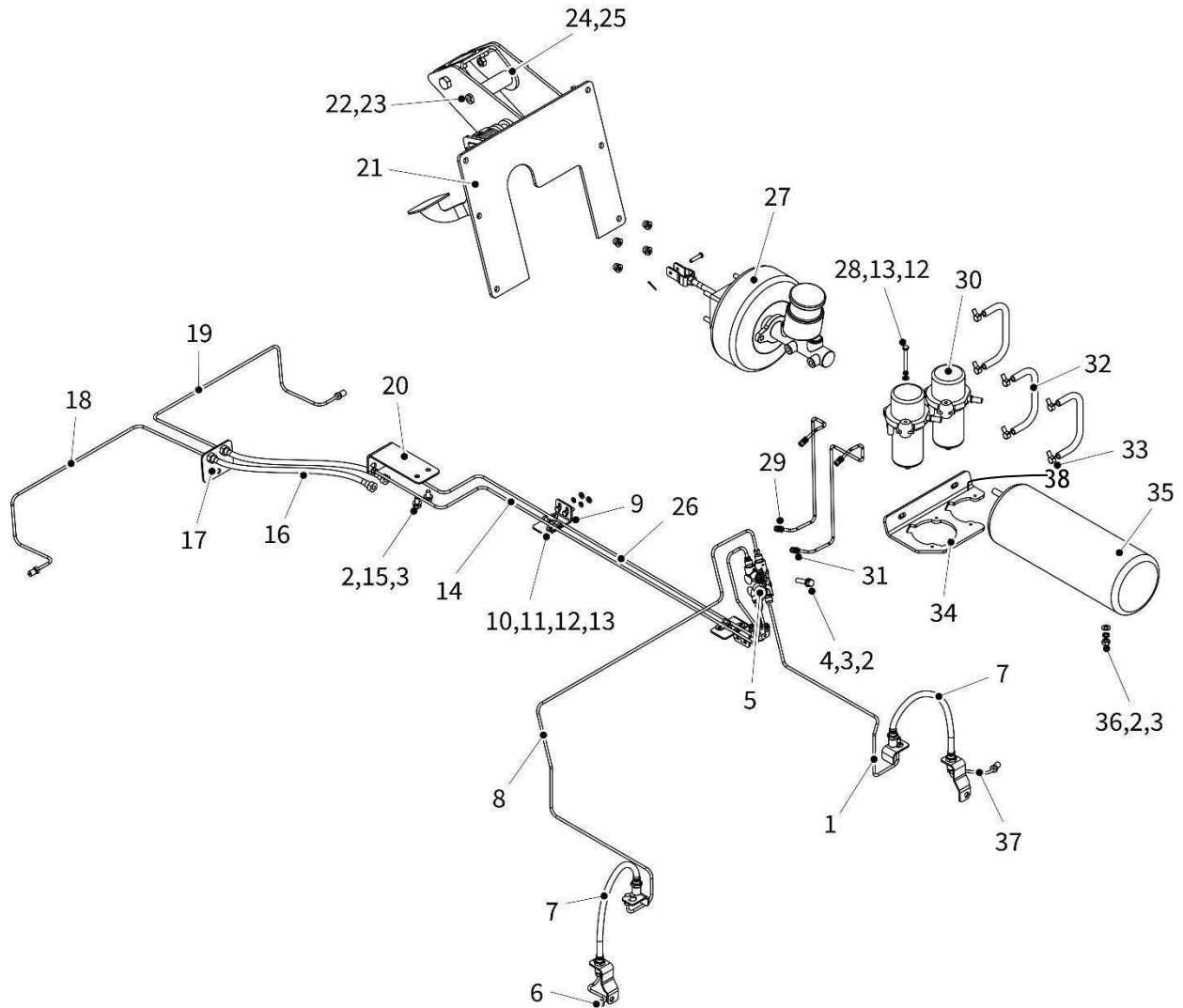


**Rolling Assembly (Rear Brake Drum) - Exploded Parts View**

**Rolling Assembly (Rear Brake Drum) – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW02550	Brake Drum	1	
2	PRPW02552	Retainer, Oil Seal Ring	1	
3	PRPW03332	TC115×160×14 Oil seal	1	
4	PRPW03334	30217 Bearing	1	
5	PRFA00203	Nut, M20 x 1.5	6	
6	PRFA00071	Washer, Lock, M20	6	
7	PRFA00204	Rim Bolt	6	
8	PRPW02509	O Ring, dia. 77.5*5.3	1	
9	PRPW02553	115, Retainer, Oil Seal Ring	1	
10	PRPW03333	TC115×140×14 Oil seal	1	
11	PRPW02285	Wheel Nut, Rear	6	
12	PRPW02554	Plate, Locking	1	
13	PRFA00007	Washer, Lock, M6	2	
14	PRFA00130	Bolt, M6 x 12mm	2	
15	PRPW03335	32216 Bearing	1	

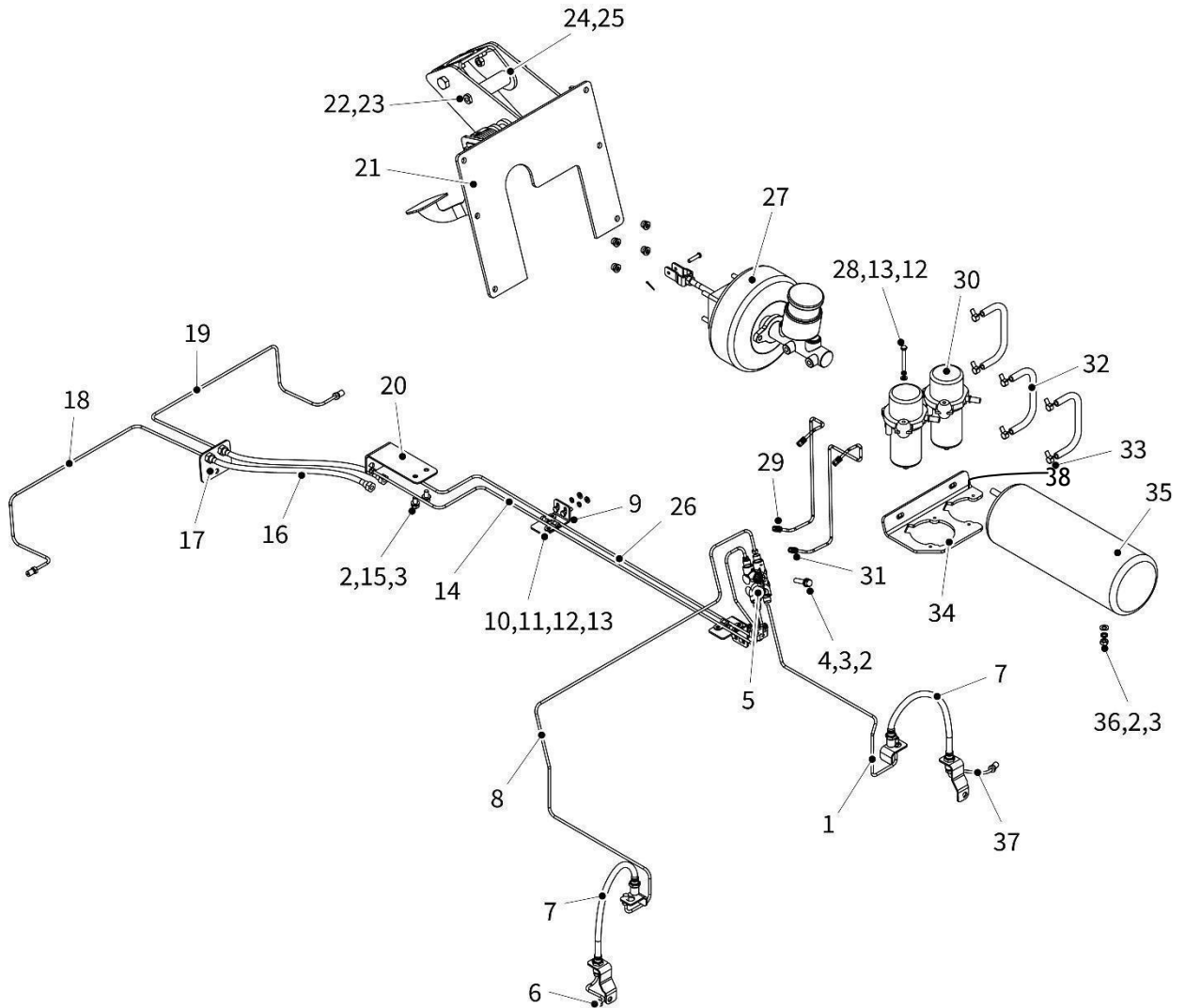
# BRAKING SYSTEM



**Brake Control Mounting- Exploded Parts View**

**Brake Control Mounting – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00220	Brake Pipe, Front, LH	1	
2	PRFA00010	Washer, Lock, M8	7	
3	PRFA00009	Washer, Flat, M8	7	
4	PRFA00047	Bolt, M8 x 35mm	1	
5	PRPW00214	Valve Assembly, Six Way Proportioning	1	
6	PRPW00231	Right Front Brake Pipe	1	
7	PRPW00251	Front Brake Hose	2	
8	PRPW00235	Brake Pipe, Front, RH	1	
9	PRPW00813	Fixed Clamp Plate	2	
10	PRFA00003	Clamp, Brake Pipe	4	
11	PRFA00001	Bolt, M6 x 20mm	8	
12	PRFA00006	Washer, Flat, M6	12	
13	PRFA00007	Washer, Lock, M6	12	
14	PRPW00223	Brake Pipe, RH	1	
15	PRFA00061	Bolt, M8 x 16mm	4	
16	PRPW00291	Rear Brake Hose	2	
17	PRPW00815	Rear Brake Hose Support	1	Brilliance Drive Axle
18	PRPW00234	Right Rear Brake Pipe	1	Brilliance Drive Axle
19	PRPW00233	Left Rear Brake Pipe	1	Brilliance Drive Axle
20	PRPW00817	Rear Brake Hose Support	1	
21	PRPW00818	Brake Assembly	1	
22	PRFA00095	Washer, Special	2	
23	PRFA00059	Bolt, Special	2	
24	PRFA00096	Washer, Special	1	



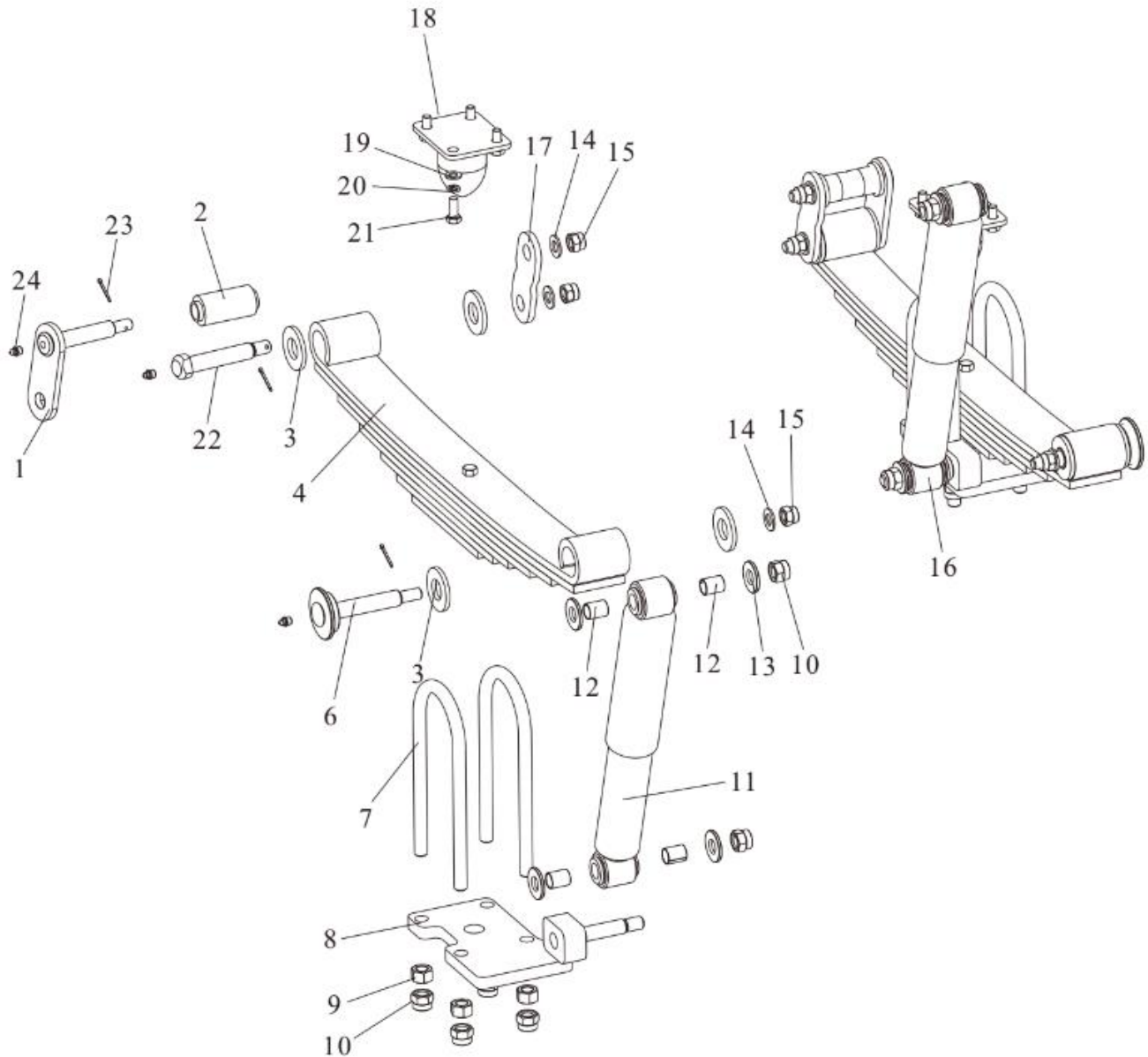
**Brake Control Mounting- Exploded Parts View**



**Brake Control Mounting – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
25	PRFA00062	Bolt, Special	1	
26	PRPW00222	Brake Pipe, LH	1	
27	PRPW00228	Master Cylinder and Booster	1	
28	PRFA00064	Bolt, M6 x 45mm	4	
29	PRPW00221	Left Brake Master Cylinder Pipe (F)	1	
30	PRPW02945	Vacuum Pump	2	
31	PRPW00219	Right Brake Master Cylinder Pipe (R)	1	
32	PRPW00819	Tube, dia. 7mm	3	
33	PRPW00820	Hoop, Tube, dia. 11mm	6	
34	PRPW00821	Vacuum Pump Mounting Bracket	1	
35	PRPW02946	Vacuum Tank	1	
36	PRFA00021	Nut, M8	2	
37	PRPW00232	Left Front Brake Pipe	1	
38	PRPW00224	Brake vacuum switch, 12V	2	

# SUSPENSION



**Rear Suspension - Exploded Parts View**

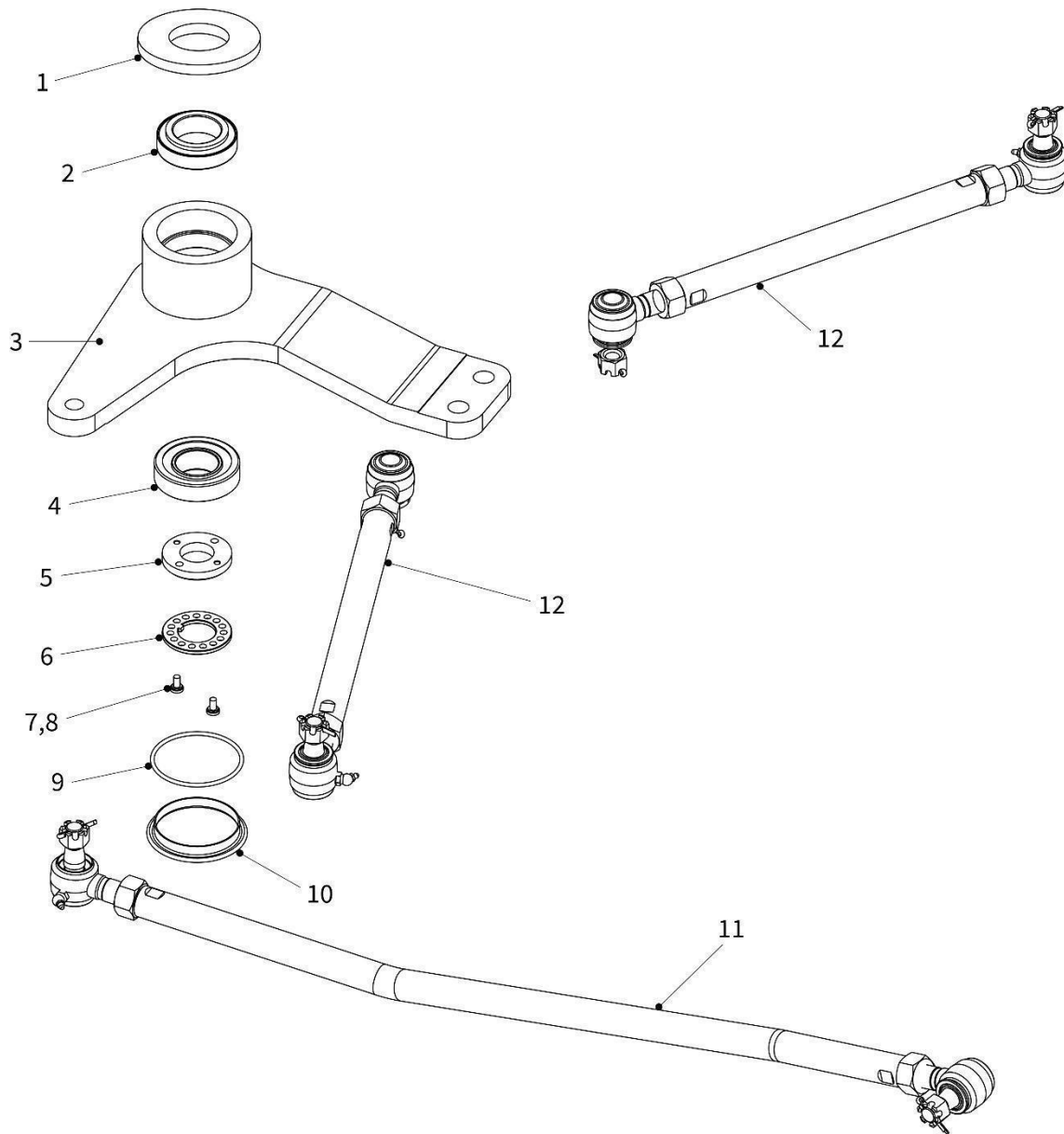
### Rear Suspension – Spare Parts List

Item	Part No.	Description	Qty	Remarks
1	PRFA00342	Pin	2	
2	PRPW00414	Bushing, Rubber	2	
3	PRPW02009	Nylon Gasket	8	
4	PRPW02010	Rear Leaf Spring Assembly	2	
5	PRFA00343	Pin	2	
6	PRFA00344	Bolt	4	
7	PRPW03324	Spring Seat, Right-hand	1	
8	PRFA00073	Nut, M16	8	
9	PRFA00073	Nut, M16	8	
10	PRPW00201	Rear Shock Absorber	2	
11	PRPW00830	Bearing Bushing	8	
12	PRFA00068	Washer, Flat, M16	10	
13	PRFA00079	Nut, M16 x 1.5	10	
14	PRPW03325	Spring Seat, Left-hand	1	
15	PRPW03326	II Plate	2	
16	PRPW00829	Bump Stop	2	
17	PRFA00011	Washer, Flat, M10	8	
18	PRFA00012	Washer, Lock, M10	8	
19	PRFA00063	Bolt, M10 x 25 mm	8	
20	PRPW03327	Gasket	8	
21	PRFA00345	Pin	2	
22	PRFA00162	Pin, Split Cotter, 3.2 x 22mm	6	
23	PRPW03336	Oil Cup, M10 x 1	6	



**Steering System – Spare Parts List**

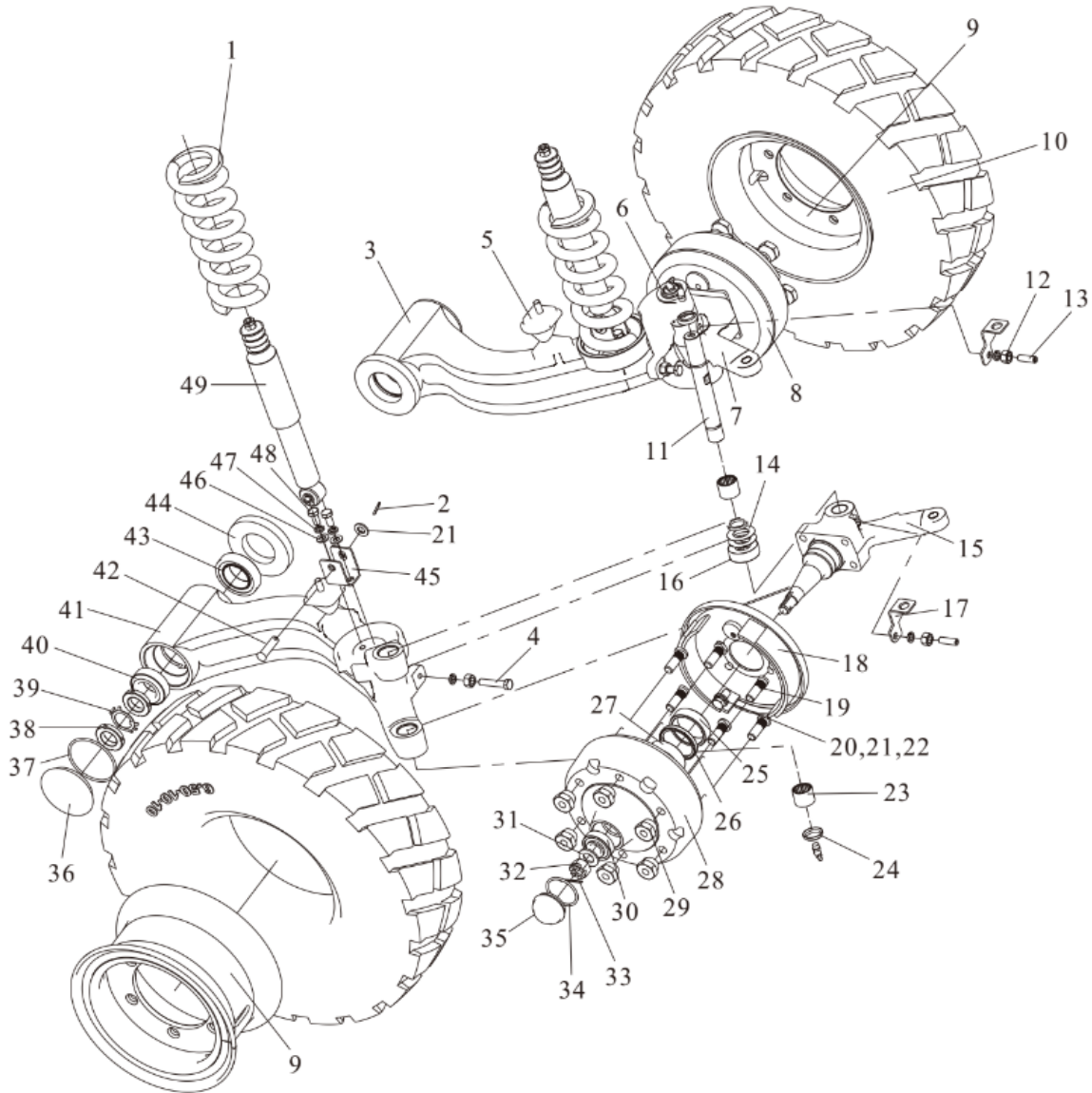
Item	Part No.	Description	Qty	Remarks
1	PRPW00192	Steering Wheel Assembly	1	
2	PRFA00012	Washer, Lock, 10	6	
3	PRFA00008	Bolt, M10 x 30 mm	8	
4	PRFA00011	Washer, Flat, M10	6	
5	PRPW00393	Steering Column Assembly	1	
6	PRPW00354	Steering Shaft Assembly	1	
7	PRPW00883	Right-Angle Connector	1	
8	PRPW00838	Power Steering Pump	1	
9	PRPW00213	Steering Arm	1	
10	PRPW00884	Right-Angle Connector	1	
11	PRPW00839	Hydraulic Hose	1	
12	PRPW03328	O-ring	1	
13	PRPW00885	Straight Connector	1	
14	PRPW03329	O-ring	1	
15	PRPW00886	Right-Angle Connector	1	
16	PRPW00244	Hydraulic Hose	1	
17	PRPW00841	Power Steering Box, GY85U2	1	
18	PRFA00068	Washer, Flat, M16	4	
19	PRFA00069	Washer, Lock, M16	4	
20	PRFA00066	Bolt, M16 x 1.5 x 40mm	4	
21	PRPW00881	Clamp, Hose, 32 x 28mm	2	
22	PRPW00842	Hose, dia.22 mm, length 180mm	1	
23	PRPW00882	Clamp, Hose, 30 x 25mm	2	
24	PRPW00843	Hose, dia.16 mm, length 440mm	1	
25	PRPW00844	Bracket, Power Steering Fluid Bottle	1	
26	PRFA00013	Bolt, M8 x 25 mm	2	
27	PRFA00010	Washer, Lock, M8	4	
28	PRFA00009	Washer, M8	4	
29	PRFA00036	Nut, M10	2	
30	PRPW00593	Power Steering Fluid Bottle	1	



**Steering Linkage - Exploded Parts View**

**Steering Linkage – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00845	Felt Gasket	1	
2		PRPW00434 See Item#15, page 163, Suspension	1	
3	PRPW00198	Rocker	1	
4	PRPW00197	Tapered Roller Bearing	1	Type HR32208J, single row, i.d. 45 mm, o.d. 75mm, width 20mm
5	PRFA00082	Nut, Locking, Special	1	
6	PRPW00846	Gasket, Locking, Special	1	
7	PRFA00016	Screw, M6 x 12mm	2	
8	PRFA00007	Washer, Lock, M6	2	
9	PRPW00847	O-Ring, 80 x 3.55 mm	1	
10	PRPW00833	Cap-hub	1	
11	PRPW00409	Track Rod Assembly	1	
12	PRPW00190	Tie Rod Assembly	2	



**Front Axle Steering + Front Suspension + Wheels +Tires - Exploded Parts View**



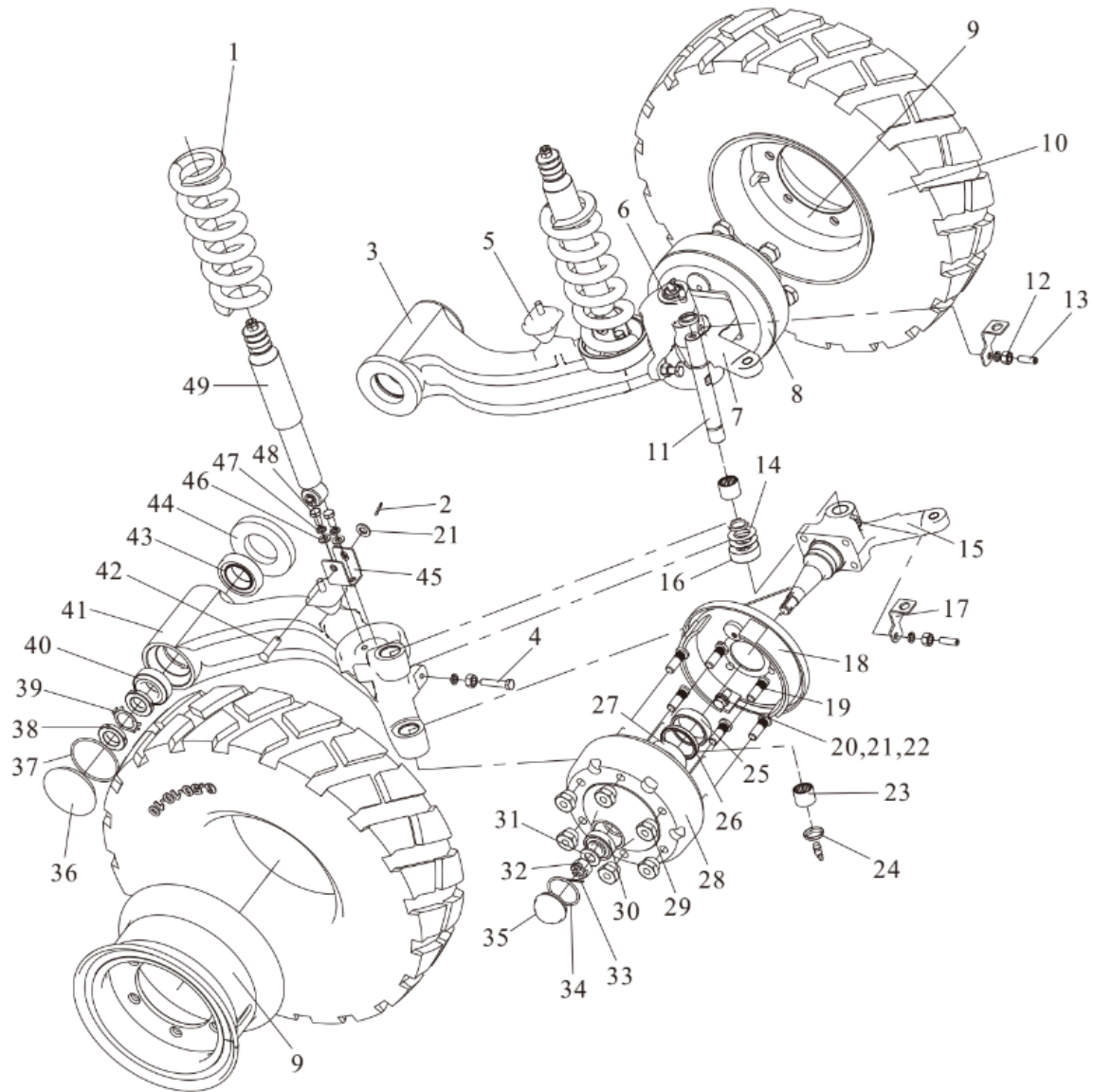
**Front Axle Steering – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW00279	Front Coil Spring	2	
2	PRFA00162	Pin, Split Cotter, 3.2 x 22mm	2	
3	PRPW00412	Right Cantilever	1	
4	PRFA00195	Bolt, M10 x 50 mm	2	
5	PRPW00831	Bump Stop	2	
6	PRPW00849	Grease Nipple, M10 x 1	4	
7	PRPW00203	Knuckle, Right-Hand	1	
8	PRPW00188	Front brake loaded assy, Right Hand	1	
9	PRPW00212	Front Rim Assembly, 5.00F-10	2	
10	PRPW00049	Tire, 6.50-10-10PR	2	
11	PRPW00193	King Pin	2	
12	PRFA00074	Nut, M12 x 1.25	4	
13	PRFA00084	Screw, Special	2	
14	PRPW00509	King Pin Shim Washer	4	
15	PRPW00204	Knuckle, Left-Hand	1	
16	PRPW00410	Bearing	2	
17	PRPW00850	Support	2	
18	PRPW00392	Front brake loaded assy, Left Hand	1	
19	PRFA00090	Front wheel stud	12	
20	PRFA00067	Bolt, M12 x 1.25 x 25mm	8	
21	PRFA00030	Washer, Flat, M12	10	
22	PRFA00034	Washer, Lock, M12	8	
23	PRPW00510	Bearing	4	
24	PRPW00501	Dust Ring	4	
25	PRPW00442	Front hub bearing spacer	2	
26	PRPW00438	Oil Seal	2	
27	PRPW00195	Tapered Roller Bearing	2	

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28	PRPW00300	Front Hub	2	
29	PRPW00296	Nut Wheel nut, front	12	
30	PRPW00194	Tapered Roller Bearing	2	

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**Front Axle Steering + Front Suspension + Wheels + Tires - Exploded Parts View**

### Front Axle Steering – Spare Parts List

Item	Part No.	Description	Qty	Remarks
31	PRFA00112	Washer, Flat, M18	2	
32	PRPW00439	Castle nut, M18 x 1	2	
33	PRFA00161	Pin, Split Cotter, 4 x 30mm	2	
34	PRPW00876	O-ring, 47.5 x 1.8mm	2	
35	PRPW00440	Hub Cover	2	
36	PRPW00833	Cantilever Dust Cover	2	
37	PRPW00834	O-ring, 80 x 1.8mm	2	
38	PRFA00081	Nut, M30 x 1.5	4	
39	PRFA00100	Washer, Flanged, M30	2	
40	PRPW00835	Tapered Roller Bearing	2	
41	PRPW00411	Left Cantilever	1	
42	PRFA00101	Pin, 12 x 45mm	2	
43	PRPW00434	Tapered Roller Bearing	2	
44	PRPW00837	Gasket, Felt	2	
45	PRPW00832	Support	2	
46	PRFA00011	Washer, Flat, M10	4	
47	PRFA00012	Washer, Lock, M10	8	
48	PRFA00065	Bolt, M10 x 1.25 x 20	4	
49	PRPW00200	Front Shock Absorbers	2	



**Labels – Spare Parts List**

Item	Part No.	Description	Qty	Remarks
1	PRPW03220	Set of Labels for XT560G Tractor (complete set of labels for Tractor)	1	

# SUPPLEMENTARY INFORMATION



## LIFTING/SHIPPING THE TRACTOR

ALWAYS lift the Tractor using a forklift. There are NO lifting points on the Tractor to which lifting slings or chains can be safety attached.

The Safe Working Load (SWL), also known as Rated Capacity, of the forklift MUST be at least 4500 kg (4.5 Tons). A Rated Capacity of 5 Tons is recommended. The length of the forks MUST be at least 1500 mm (5 feet).



### WARNING – SIZE AND WEIGHT OF TRACTOR

**The Tractor weighs 4300 kg (9480 lbs). When lifting the Tractor, always use a forklift truck with a Safe Working Load (SWL) of at least 4500 kg (4.5 Tons). DO NOT use a crane with lifting slings or chains, there are no lifting points on the Tractor.**

**The Tractor must always be towed or moved using a suitable vehicle.**

There are two rows of fork bearing plates on the underside of the Tractor. Adjust the width of the forks to 650 mm (26 in.) and lift the Tractor from the side as shown in the Lifting Diagram below.

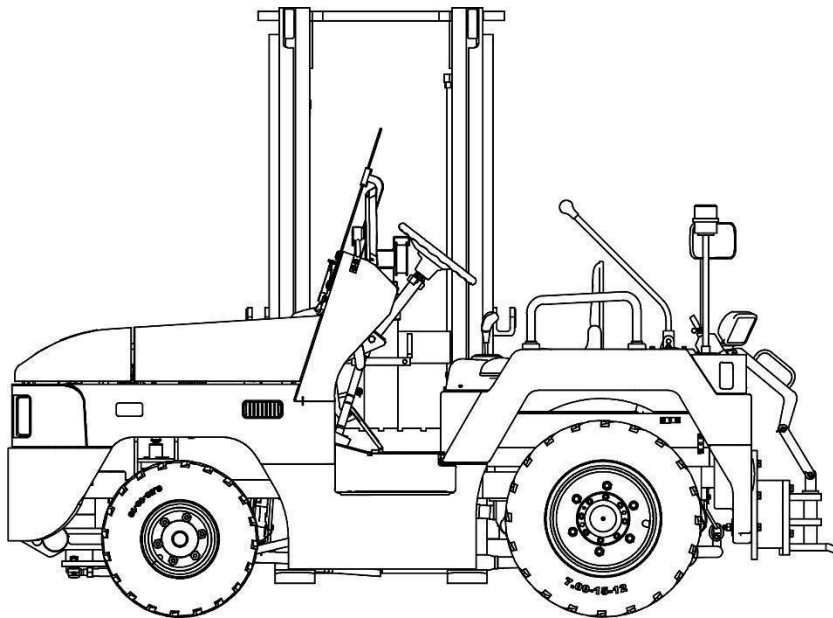


Figure 16 - Lifting diagram

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## **WARRANTY**

All Avro GSE products are covered by our Warranty Policy. If you require a copy of our Warranty Policy, please contact us using the contact details given on page 2 of this manual.

## **DISPOSAL**

The XT560G Tractor contains electrical components, including a vehicle battery. A Tractor that is damaged beyond economic repair, or worn out, should be recycled at a metal recycling facility.

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# APPENDICES

**PSI NGE 4G DIAGNOSTIC MANUAL**

**OKAMURA TRANSMISSION PARTS LIST – Y43340D,  
Y43290D, AND Y43370D**



XT560G Tractor

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