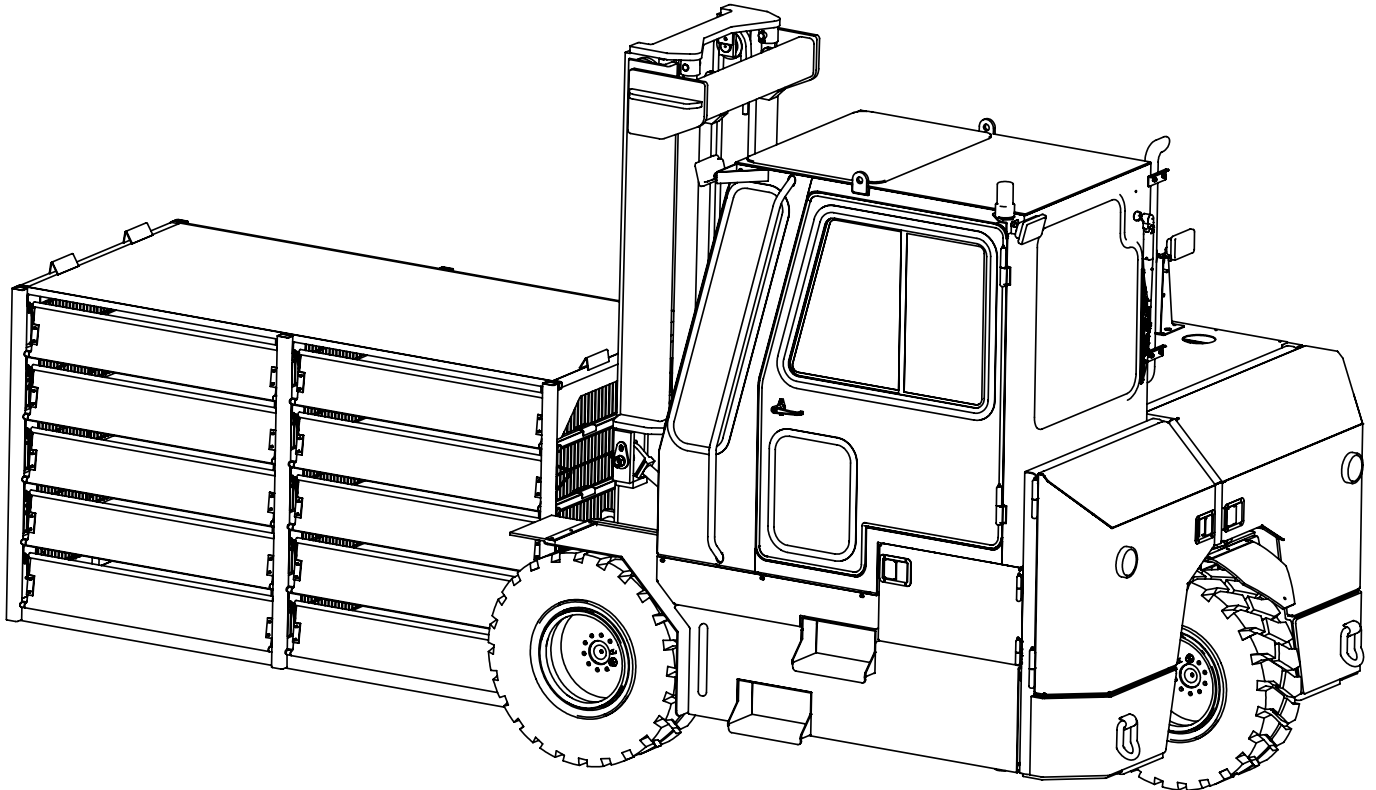




# ***Bright Forklift Montacargas Bright***

***BD3-7570***



## ***Operator's Manual Manual del operador***

Bright Coop Inc.  
803 W. Seale St.  
Nacogdoches, TX 75964  
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Printed in the U.S.A. 1-1-2019  
BC# 097-24340\_EN&SP



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# Bright Forklift

**BD3-7570**

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**Bright Forklift**

**BD3-7570**

**Study**  
to Be **Knowledgeable**

**Study**  
to Be **Safe**

**Study**  
for Your **Safety &**

**Study**  
for The **Safety of Others**

**Safety**  
**is The**  
**Operator's Responsibility**



# Bright Forklift

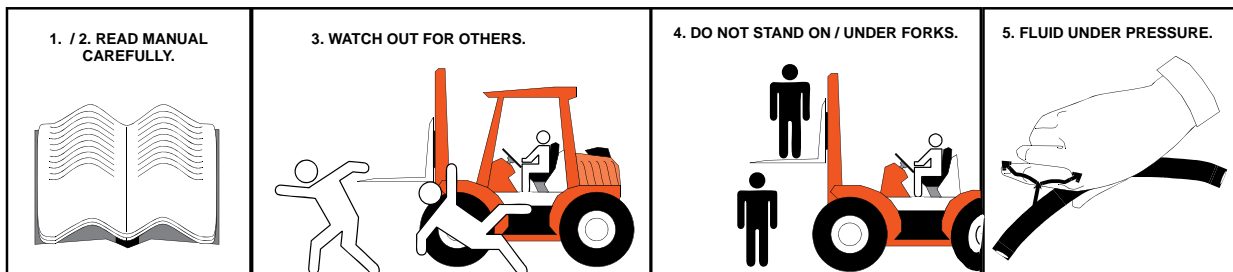
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## IMPORTANT! PRECAUTIONS & DANGERS

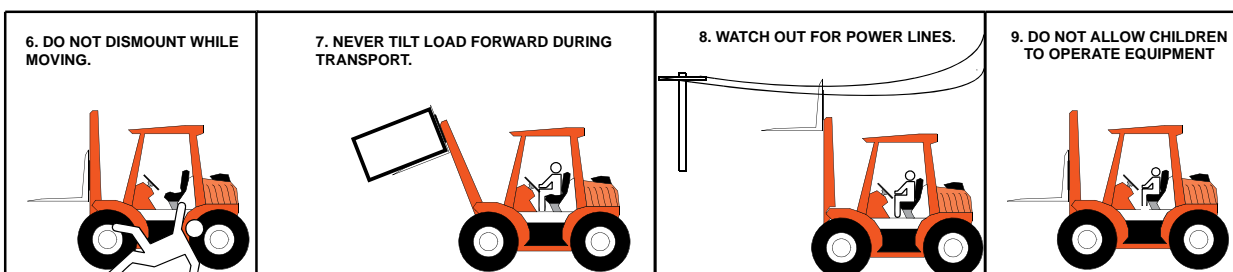
THE FOLLOWING PRECAUTIONS ARE SUGGESTED TO HELP PREVENT ACCIDENTS. A CAREFUL OPERATOR IS THE BEST OPERATOR. MOST ACCIDENTS CAN BE AVOIDED BY OBSERVING CERTAIN PRECAUTIONS. READ AND TAKE THE FOLLOWING PRECAUTIONS BEFORE OPERATING THIS FORKLIFT. EQUIPMENT SHOULD BE OPERATED ONLY BY THOSE WHO ARE RESPONSIBLE AND INSTRUCTED TO DO SO.



FAILING TO FOLLOW SAFETY WARNINGS AND INSTRUCTIONS CAN RESULT IN SERIOUS BODILY INJURY OR EVEN DEATH TO OPERATOR AND/OR OTHERS, IN THE AREA.



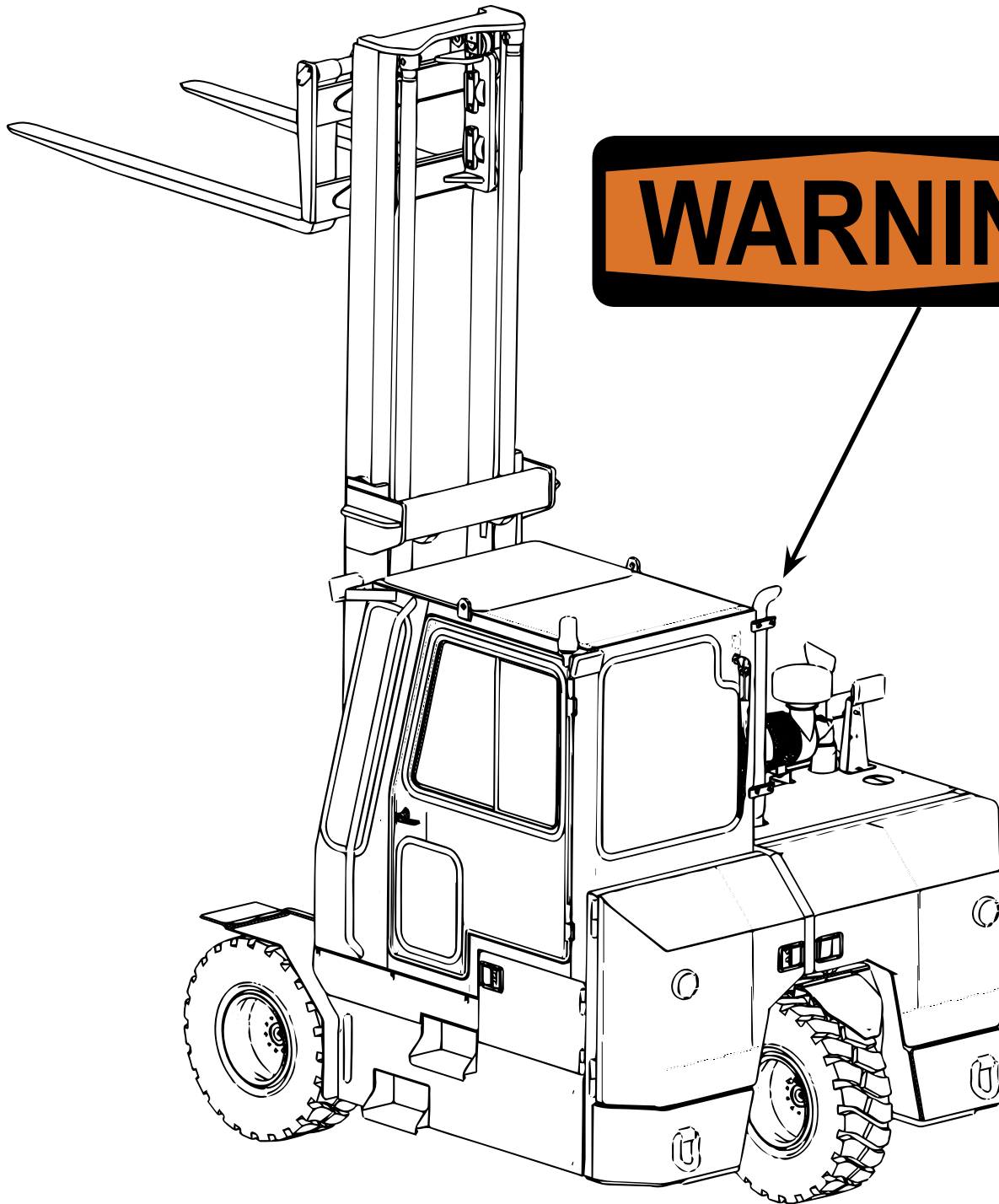
1. Study the Operator's Manual thoroughly, and be completely knowledgeable about operation of equipment.
2. Please pay close attention to Safety Warnings posted in various areas of the Operation Section.
3. Be careful of other persons in vicinity. ALLOW NO RIDERS.
4. DO NOT stand on or under the forks for any reason.
5. Hydraulic fluid is under pressure. DO NOT use hand to check for leaks. Use a piece of cardboard or paper. If fluid is injected into skin, obtain medical attention immediately.
6. Always start engine while sitting in operator's seat. Shut off equipment before dismounting from machine. TURN THE MAIN SWITCH OFF before performing any service or maintenance.
7. Never tilt forks forward while transporting load. This could cause machine to tip over. Keep load tilted backward and as close to the ground as possible.
8. Watch for low clearances such as power lines when operating equipment. Electrocutation could occur as a result of contact.
9. NEVER allow children or anyone not properly trained to operate equipment.





# Bright Forklift

**BD3-7570**



**WARNING**





# ***Bright Forklift***

**BD3-7570**

## **WARNING**

**The engine exhaust from this product contains chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.**



***Bright Forklift***

***BD3-7570***

***Safety***

***is The***

***Operator's***

***Responsibility***



# Bright Forklift

**BD3-7570**

## COUNTERBALANCED FORKLIFT TRUCK GENERAL SAFETY STANDARDS

### STUDY THE OPERATOR MANUAL

The information in this manual provides general instructions for the safe operation and basic maintenance of your forklift truck. This information is vital and must be clearly understood by the operator and serviceman. Study this manual and the Kubota Diesel Engine Manual thoroughly and carefully before operating or servicing your forklift. Contact your dealer or Bright Coop Inc. if you have any questions concerning your forklift, its operation, service or parts. Keep both manuals in the literature box on the forklift available for reference. If either manual becomes illegible or is missing, contact your dealer for replacements immediately. This manual cannot cover every situation that might result in an accident. It is the responsibility of the operator to always remain alert for potential hazards and be prepared to avoid them!

### ADDITIONAL IMPORTANT LITERATURE

ANSI / ITSDF B56.1 is the national consensus standard for low lift and high lift forklift trucks. It contains rules about forklift safety, maintenance, safe operation, training, and supervision. Forklift owners must learn this standard and make it available for their operators, service personnel, and supervisors. This standard can be obtained from the American Society of Mechanical Engineers (ASME), 345 East 47th St., United Engineering Center, New York, NY 10017. The following references are examples from the standard, addressing forklift operators:

### A.) OPERATOR TRAINING QUALIFICATIONS

1. The Owner shall ensure that operators understand that safe operation is the operator's responsibility. The owner shall ensure that operators are knowledgeable of, and observe, all safety rules and practices.
2. Create an effective operator training program centered around user company's policies, operating conditions, and forklift trucks. The program should be presented completely to all new operators and not be condensed for those claiming previous experience.
3. Information on operator training is available from several sources, including forklift truck manufacturers, users, government agencies, etc.
4. An operator training program should consist of the following:
  - a. careful selection of the operator, considering physical qualifications, job attitude, and aptitude;
  - b. emphasis on safety of stock, equipment, operator, and other personnel;
  - c. citing of rules and why they were formulated;
  - d. basic fundamentals of forklift truck and component design as related to safety, e.g., ft.-lb (N-m) loading, mechanical limitations, center of gravity, stability, etc.;
  - e. introduction to equipment, control locations, and functions. Explain how they work when used properly and problems when used improperly;
  - f. supervise practice on operating course remote from normal activity and designed to simulate actual operations, e.g., lumber stacking, elevating shingles to the roof, etc.;
  - g. oral, written, and operational performance tests and evaluations during and at completion of the course;
  - h. refresher courses, which may be condensed versions of the primary course, and periodic "on job" operator evaluation;
  - i. understanding of nameplate data, operator instructions and warning information appearing on the forklift truck.



# Bright Forklift

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## COUNTERBALANCED FORKLIFT TRUCK GENERAL SAFETY STANDARDS (CONT.)

### B.) GENERAL SAFETY PRACTICES

1. Forklift trucks can cause injury if improperly used or maintained.
2. Only authorized operators trained to adhere strictly to all operating instructions shall be permitted to operate forklift trucks. Unusual operating conditions may require additional safety precautions, training, and special operating instructions.
3. Modifications and additions which affect capacity or safe operation shall not be performed without the manufacturer's prior written approval. Where such authorization is granted, capacity, operation, and maintenance instruction plates, tags, or decals shall be changed accordingly.
4. If the forklift truck is equipped with front end attachment(s) or optional forks, the user shall see that the truck is marked to identify the forks or attachment(s), show the approximate weight of the truck and fork or attachment combination, and show the capacity of the truck with forks or attachment(s) at maximum elevation with load laterally centered.
5. The user shall see that all nameplates, caution and instruction markings are in place and legible.
6. The user shall consider that changes in load dimension may affect forklift truck capacity.
7. Where steering can be accomplished with either hand and the steering mechanism is of a type that prevents road reactions from causing the hand wheel to spin (power steering or equivalent), steering knobs may be used. When used, steering knobs shall be of a type that can be engaged by the operator's hand from the top and shall be within the periphery of the steering hand wheel.
8. Experience has shown that forklift trucks, which comply with stability requirements, are stable when properly operated. However, improper operation, faulty maintenance, or poor housekeeping may contribute to a condition of instability and defeat the purpose of the requirements.
9. Users shall give consideration to special operating conditions. The amount of forward and rearward tilt to be used is governed by the application. Although the use of maximum rearward tilt is allowable under certain conditions, such as traveling with the load lowered, the stability of a forklift truck as determined by standardized tests does not encompass consideration for excessive tilt at high elevations or the operation of trucks with excessive off-center loads.
10. Some of the conditions which may affect stability are ground and floor conditions, grade, speed, loading (forklift trucks equipped with attachments behave as partially loaded trucks even when operated without a load on the attachment), dynamic and static forces, improper tire inflation, and the judgment exercised by the operator.

# WARNING

**NEVER USE THIS FORKLIFT TRUCK TO ELEVATE PERSONNEL,  
EVEN IF YOU ARE USING A PERSONNEL PLATFORM.**

**IT IS PROHIBITED TO ELEVATE PERSONNEL WITH A FORKLIFT  
THAT IS EQUIPPED WITH A ROTATOR.**



# Bright Forklift

**BD3-7570**

## COUNTERBALANCED FORKLIFT TRUCK GENERAL SAFETY STANDARDS (CONT.)

### C.) OPERATING SAFETY RULES AND PRACTICES

1. Safe operation is the responsibility of the operator.
2. This equipment can be dangerous if not used properly. The operator shall develop safe working habits and also be aware of hazardous conditions in order to protect himself, other personnel, the forklift truck, and other material.
3. The operator shall be familiar with the operation and function of all controls and instruments before undertaking the operation of the forklift truck.
4. Before operating any forklift truck, truck operators shall have read and be familiar with the operator's manual for the particular truck being operated.
5. Before starting to operate the forklift truck;
  - a. be in operating position and fasten seat belt;
  - b. place directional control in neutral;
  - c. apply Parking brake;
  - d. start engine.
6. Do not start or operate the forklift truck from any place other than the designated operator's position.
7. Keep hands and feet inside the operator's designated area or compartment. Do not put any part of the body outside the operator compartment of the forklift truck.
8. Never put any part of the body into the mast structure or between the mast and the forklift truck.
9. Never put any part of the body within the reach mechanism of the forklift truck or other attachments.
10. Understand forklift limitations and operate the truck in a safe manner so as not to cause injury to personnel.
11. Do not allow anyone to stand or pass under the elevated portion of any forklift truck, whether empty or loaded.
12. Do not permit passengers to ride on forklift trucks.
13. Check clearance carefully before driving under electrical lines, bridges, etc.
14. A forklift truck is attended when the operator is less than 25 ft. (7.6m) from the truck, which remains in his view.
15. A forklift truck is unattended when the operator is 25ft (7.6m) or more from the truck, which remains in his view, or whenever the operator leaves the truck and it is not in his view.
16. Before leaving the operator's position:
  - a. bring forklift truck to a complete stop;
  - b. place directional control in neutral;
  - c. apply the parking brake;
  - d. lower load-engaging means fully;
  - e. stop the engine;
  - f. if the forklift truck must be left on an incline, block the wheels.
17. Maintain a safe distance from the edge of ramps, platforms, and other similar working surfaces.
18. Do not move railroad cars or trailers with a forklift truck.



# Bright Forklift

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## COUNTERBALANCED FORKLIFT TRUCK GENERAL SAFETY STANDARDS (CONT.)

### C.) OPERATING SAFETY RULES AND PRACTICES (cont.)

19. Do not use a forklift truck for opening or closing railroad car doors.
20. In areas classified as hazardous, use only forklift trucks approved for use in those areas.
21. Report all accidents involving personnel, building structures, and equipment to the supervisor or as directed.
22. Do not add to, or modify, the forklift truck.
23. Do not block access to fire aisles, stairways, and fire equipment.
24. For forklift trucks equipped with a differential lock, the lock should not be engaged when driving on the road or at high speeds or when turning. If the lock is engaged when turning, there could be loss of steering control.
25. Observe all traffic regulations including authorized speed limits. Under normal traffic conditions, keep to the right, maintain a safe distance, based on speed of travel, from the truck ahead; and keep the truck under control at all times.
26. Yield the right-of-way to pedestrians and emergency vehicles such as ambulances and fire trucks.
27. Do not pass another truck traveling in the same direction at intersections, blind spots, or at other dangerous locations.
28. Slow down and sound the audible warning device(s) at cross-aisles and other locations where vision is obstructed.
29. Cross railroad tracks at an angle wherever possible. Do not park closer than 6 ft. (1.8m) to the nearest rail of a railroad track.
30. Keep a clear view of the path of travel and observe other traffic, personnel, and safe clearances.
31. If the load being carried obstructs forward view, travel with the load trailing.
32. Ascend or descend grades slowly and with caution.
  - a. When ascending or descending grades in excess of 5%, loaded forklift trucks should be driven with the load upgrade;
  - b. Unloaded forklift trucks should be operated on all grades with the load-engaging means downgrade;
  - c. On all grades, the load and load-engaging means shall be tilted back, if applicable, and raised only as far as necessary to clear the road surface;
  - d. Avoid turning, if possible, and use extreme caution on grades, ramps, or inclines; normally travel straight up or down. Under all travel conditions, operate the forklift truck at a speed that will permit it to be brought to a stop in a safe manner.
33. Travel with load-engaging means or load low and, where possible, tilted back. Do not elevate the load except during stacking.
34. Make starts, stops, turns, or direction reversals in a smooth manner so as not to shift load and/or overturn the forklift truck.
35. Do not indulge in stunt driving or horseplay.
36. Slow down for wet and slippery surfaces.
37. Before driving over a dock board or bridge plate, be sure that it is properly secured. Drive carefully and slowly across the dock board or bridge plate, and never exceed its rated capacity.



# Bright Forklift

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## COUNTERBALANCED FORKLIFT TRUCK GENERAL SAFETY STANDARDS (CONT.)

### C.) OPERATING SAFETY RULES AND PRACTICES (cont.)

38. Do not drive forklift trucks onto any elevator unless specifically authorized to do so. Approach elevators slowly, and then enter squarely after the elevator car is properly leveled. Once on the elevator, neutralize the controls, shut off engine, and set the parking brake. It is advisable that all other personnel leave the elevator before truck is allowed to enter or leave.
39. Avoid running over loose objects on the roadway surface.
40. When negotiating turns, reduce speed to a safe level, and turn steering hand wheel in a smooth sweeping motion. Except when maneuvering at a very low speed, turn the steering hand rail at a moderate, even rate.
41. Use special care when traveling without load, as the risk of lateral overturning is greater.
42. Improper use of stabilizer controls (if so equipped) could cause forklift truck upset. Always lower the carriage before operating stabilizer controls.
43. For forklift trucks equipped with lateral leveling:
  - a. Always level the frame before raising the boom or mast, with or without a load;
  - b. Lateral leveling should not be used to position an elevated load; instead, lower the load and reposition the forklift truck.
44. Handle only stable or safely arranged loads.
  - a. When handling off-center loads which cannot be centered, operate with extra caution;
  - b. Handle only loads within the capacity of the forklift truck;
  - c. Handle loads exceeding the dimensions used to establish forklift truck capacity with extra caution. Stability and maneuverability may be adversely affected.
45. When attachments are used, extra care shall be taken in securing, manipulating, positioning, and transporting the load. Operate forklift trucks equipped with attachments as partially loaded trucks when not handling a load.
  - a. When handling off-center loads which cannot be centered, operate with extra caution;
  - b. Handle only loads within the capacity of the forklift truck;
  - c. Handle loads exceeding the dimensions used to establish forklift truck capacity with extra caution. Stability and maneuverability may be adversely affected.
46. When attachments are used, extra care shall be taken in securing, manipulating, positioning, and transporting the load. Operate forklift trucks equipped with attachments as partially loaded trucks when not handling a load.
47. Completely engage the load with the load-engaging means. Fork length should be at least two-thirds of load length. Where tilt is provided, carefully tilt the load backward to stabilize the load. Caution should be used in tilting backward with high or segmented loads.
48. Use extreme care when tilting load forward or backward, particularly when high tiering. Do not tilt forward with load-engaging means elevated except to pick up or deposit a load over a rack or stack. When stacking or tiering, use only enough backward tilt to stabilize the load.



# Bright Forklift

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## COUNTERBALANCED FORKLIFT TRUCK GENERAL SAFETY STANDARDS (CONT.)

### C.) OPERATING SAFETY RULES AND PRACTICES (cont.)

49. The handling of suspended loads by means of a crane arm (boom) or other device can introduce dynamic forces affecting the stability of a forklift truck. Grades and sudden starts, stops, and turns can cause the load to swing and create a hazard if not externally stabilized. When handling suspended loads:
  - a. do not exceed the truck manufacturer's capacity of the forklift truck as equipped for handling suspended loads;
  - b. only lift the load vertically and never drag it horizontally;
  - c. transport the load with the bottom of the load and the mast as low as possible;
  - d. with load elevated, maneuver the forklift truck slowly and cautiously, and only to the extent necessary to permit lowering to the transport position;
  - e. use tag lines to restrain load swing whenever possible.
50. At the beginning of each shift and before operating the forklift truck, check its condition, giving special attention to:
  - a. tires and their inflation pressure;
  - b. warning devices;
  - c. lights;
  - d. lift and tilt systems, load-engaging means and chains;
  - e. brakes;
  - f. steering mechanism;
  - g. fuel system(s).
51. If the forklift truck is found to be in need of repair or in any way unsafe, or if it contributes to an unsafe condition, the matter shall be reported immediately to the user's designated authority, and the truck shall not be operated until it has been restored to safe operating condition.
52. If during operation the forklift truck becomes unsafe in any way, the matter shall be reported immediately to the user's designated authority, and the truck shall not be operated until it has been restored to safe operating condition.
53. Do not make repairs or adjustments unless specifically authorized to do so.
54. When refueling, smoking in the area shall not be permitted, the engine shall be stopped, and the operator shall not be on the forklift truck.
55. Spillage of oil or fuel shall be carefully and completely absorbed or evaporated and fuel tank cap replaced before restarting engine.
56. Do not use open flames when checking electrolyte level in storage batteries, liquid level in fuel tanks, or the condition of LPG fuel lines and connectors.





# Bright Forklift

**BD3-7570**

## COUNTERBALANCED FORKLIFT TRUCK GENERAL SAFETY STANDARDS (CONT.)

### CONCLUSION:

#### 1.) ATTEND OPERATOR TRAINING CLASSES

The forklift operator must clearly understand all instructions concerning the safe operation of the forklift and all safety rules and regulations of the work site. They must have successfully completed a training course in accordance with the Powered Industrial Truck Standard (29 CFR 1910.178) as described by the Occupational Safety and Health Administration (OSHA). They must be qualified as to their visual, hearing, physical, and mental ability to operate the equipment safely. NEVER use drugs or alcohol while operating a forklift! NEVER operate or allow anyone to operate a forklift when mental alertness or coordination is impaired! An operator on prescription or over-the-counter drugs must consult a medical professional regarding any side effects of the medication that may impair their ability to safely operate the forklift.

#### 2.) CREATE A MAINTENANCE PROGRAM

OSHA recommends a maintenance log, listing repairs requested and completed, for each forklift. Also, "lock out tag procedures" should be utilized. If the forklift malfunctions; park it safely, remove the key, tag "Do Not Use", and report the problem to the proper authority or authorized service personnel immediately. For the best forklift performance and operation, a maintenance program is required.

Use the hour meter on the instrument panel to keep maintenance properly scheduled. For repairs on major components (engine, transmission, etc.), contact your nearest dealer for a Repair Manual. Do not operate a forklift that is damaged or does not function properly. Only authorized personnel may make repairs or adjustments to the lift truck. After repairs, the lift truck must be tested for safe operation before returning to service.

#### 3.) FORKLIFT KNOWLEDGE

Forklift trucks can cause serious injury if improperly used or maintained. Study all of the manuals provided for your forklift model. Learn the locations and meanings of all safety decals. If any decals are illegible or missing, have them replaced immediately. Make sure all safety features provided by the original manufacturer are in place and function properly. Do not operate a forklift with damaged, missing or unsafe components. Have it repaired by authorized service personnel. Learn the functions of all controls, gauges, indicator lights, etc. on the forklift. Know the speed/gear ranges, braking and steering capabilities, load ratings and clearances. When referring to the location of forklift components, the terms "left", "right", "front", and "rear" are related to the operator seated normally, facing forward in the operator's seat. If you have any questions about the forklift, consult your supervisor. Failure to fully understand or obey safety warnings can result in serious injury or death!

#### 4.) WORK SITE KNOWLEDGE

Before operating on a work site, learn the rules for movement of people, forklifts and all other traffic. Check the size, weight, and condition of the loads you will be expected to handle. Verify that they are properly secured and safe to transport. Learn where the loads are to be placed, planning your route for a safe approach, watching for hazardous conditions. Will a signalman be required to help place the load? Remove any debris, which may cause tire damage or rupture. Plan your route around problem areas or have them corrected. Inform the supervisor of any unsafe conditions observed at the site. Examples of hazards: power lines, cables, low clearance structures, garage doors, telephone pole guide lines, fencing, loose lumber, building materials, drop-offs, trenches, rough/soft spots, oil spills, deep mud, steep inclines, railroad tracks, curbs, etc. NEVER approach power lines, gas lines or other utilities with the forklift! Always verify that local, state/provincial and federal regulations have been met. Report any accidents involving personnel, building structures, and equipment to the supervisor immediately. Always remain alert - conditions are constantly changing at the work site!

## TECHNICAL SUPPORT

All data provided in this manual is subject to production changes, addition of new models, and improved product designs. If a question arises regarding your forklift, please consult your dealer or Bright Coop Inc. for the latest information. When ordering service parts or requesting technical information, quote the applicable Model/Serial Number.

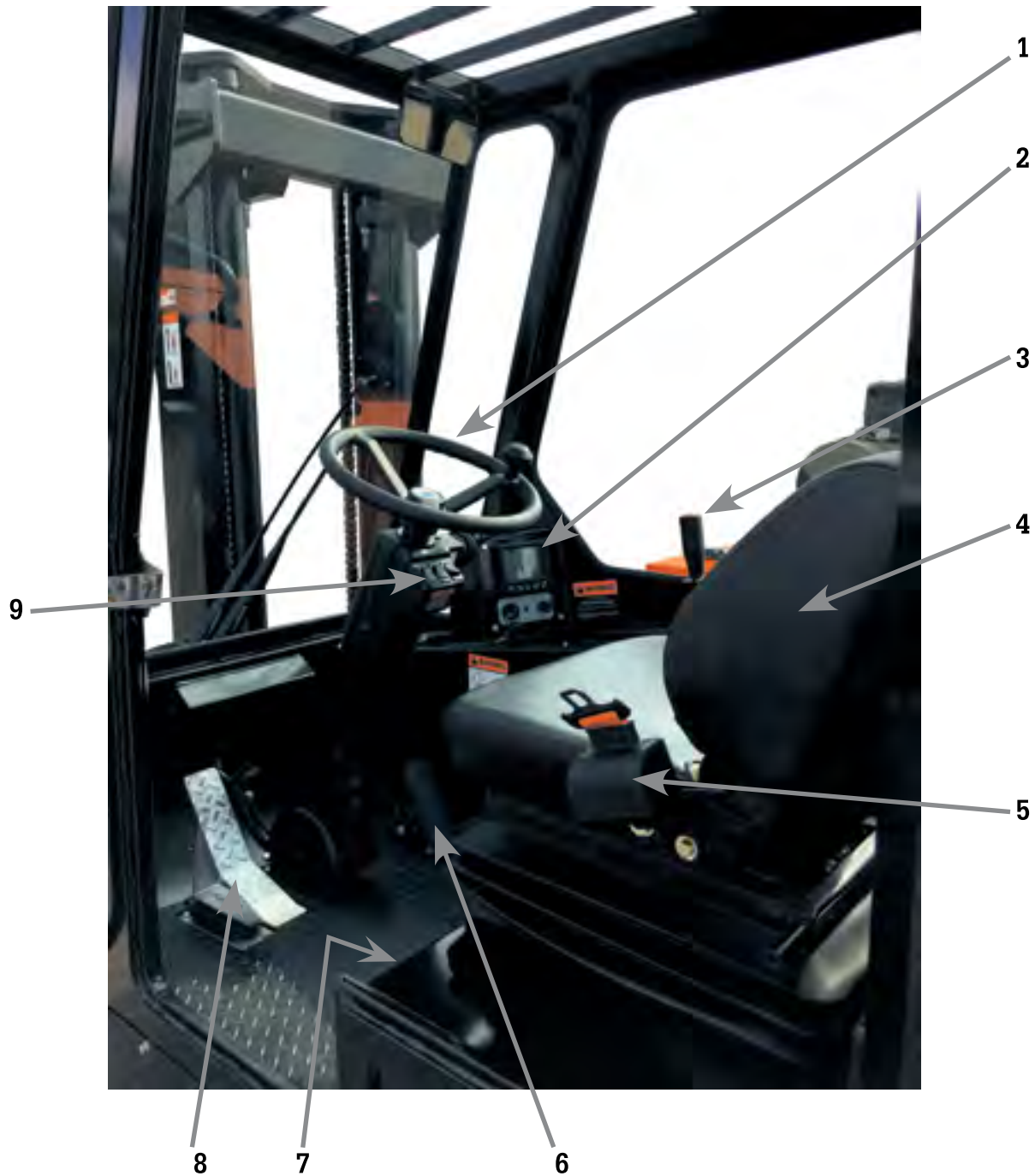


# Bright Forklift

**BD3-7570**

## INSTRUMENTS AND CONTROLS

Image A





# **Bright Forklift**

**BD3-7570**

## **INSTRUMENTS AND CONTROLS**

**Image A:**

### **Controls Description**

1. **Steering wheel**
2. **Instruments Panel**
3. **Joystick - Hydraulic Mast Control**
4. **Operator's seat**
5. **Seat belt**
6. **Foot Throttle**
7. **Nameplate**
8. **Hydrostatic Direction & Speed Control**
9. **Column Controls**

## INSTRUMENTS AND CONTROLS

**Image B: Instrument Panel**

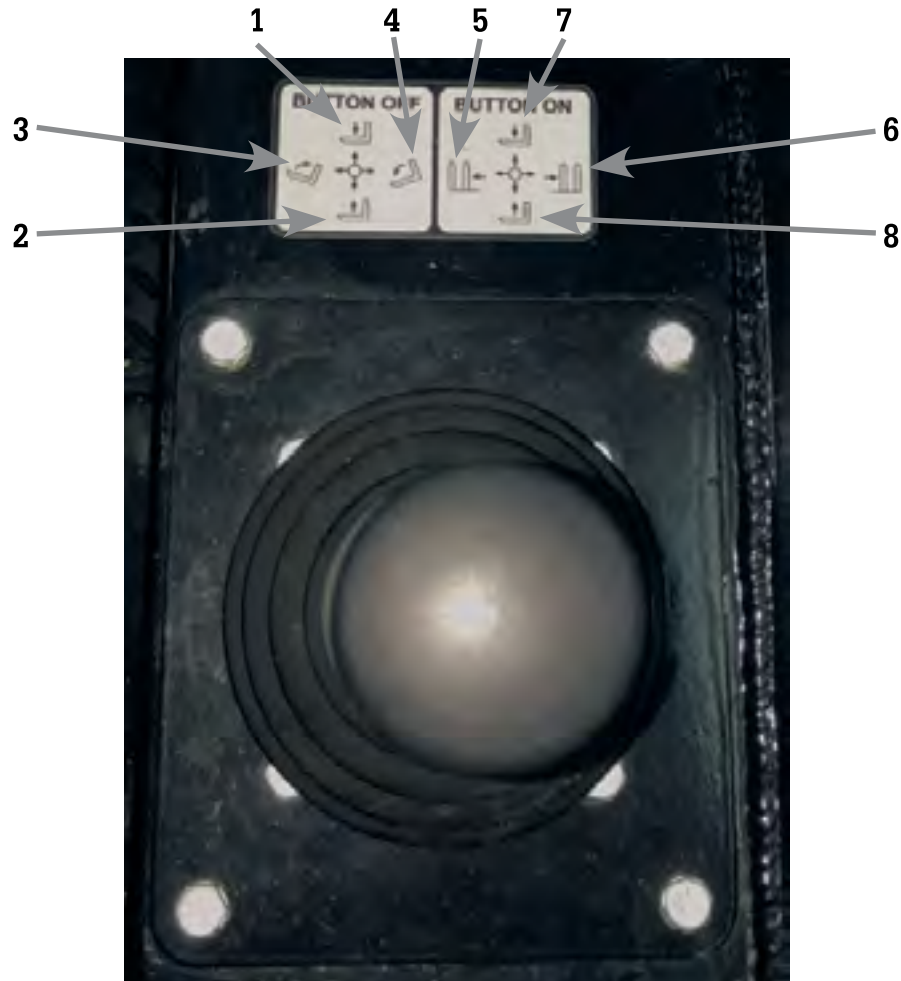


### Instrument Panel Description

1. PV380 Digital Display
2. Heater Control
3. Dirty Filter Indicator
4. Ignition

### INSTRUMENTS AND CONTROLS

Image C: Mast Controls



#### Mast Controls Description

##### Button Off:

- 1. Lowering Mast
- 2. Raising Mast
- 3. Tilt Rearward
- 4. Tilt Forward

##### Button On:

- 5. Side Shift Left
- 6. Side Shift Right
- 7. Rotator Counter Clockwise (If Equipped)
- 8. Rotator Clockwise (If Equipped)

### INSTRUMENTS AND CONTROLS

Image D: Column Controls



#### Column Controls Description

1. Horn
2. Work Lights
3. Parking Brake
4. Wiper Controls
5. Heater Vent



# Bright Forklift

**BD3-7570**

## GENERAL OPERATION INSTRUCTIONS

### Drivers operating instructions

1. Wear clothes suited for driving the lift truck. Avoid loose fitting clothes.
2. Never operate the vehicle when hands or feet are wet or soiled with greasy substances.
3. When mounting the forklift, do not use the steering wheel as a pull handle; use the step provided when mounting or dismounting the forklift.
4. For increased comfort adjust the driver's seat as required.
5. The operator must always be seated normally when in the driver's seat. It is prohibited to have arms, legs or any part of the body, extended from the cab of the forklift.
6. Always remember to fasten your seat belt and adjust it properly before operating the forklift.
7. Never allow a passenger to travel on the lift truck, or in the cab.

### Before starting the forklift

1. Check the condition of the tires and tire pressures.
2. Check all fluid levels engine oil, hydraulic reservoir oil, and cooling system.
3. Check for possible leaks: oil, fuel, or other fluids.
4. Check the latches on the hood and engine compartments.
5. It is advised that the operator be familiarized with the location and operation of all the instruments and controls before operating the forklift.

### Starting the forklift

**WARNING**

**Do not operate the forklift unless properly seated, with seat belt fastened**

**NOTICE**

**Never try to start the forklift by pushing or towing it. Pushing or towing the forklift can cause severe damage to the transmission**

1. Verify that the parking brake is engaged.
2. Make sure that the Hydrostatic direction & speed control pedal is in neutral position.
3. In cold condition turn the ignition key to position "ON" and hold until indicator light turns off.
4. Turn the key to the "ST" (Starting) position and the engine should start. Release the key immediately when the engine starts.
5. Check to see that the oil pressure lamp and charge lamp are off. If the lamps are still on, immediately stop the engine, and determine the cause.
6. Warm up the engine at medium speed without load.

**NOTICE**

**Do not engage the starter motor for more than 15 seconds at a time. Wait 2 minutes between starting attempts, allowing starter to cool down. Engage the pre-heater for 10 seconds between attempts.**



# Bright Forklift

**BD3-7570**

## Driving the forklift

1. Always drive the forklift with the forks or attachment at approximately 12 inches (300 mm.) from the ground.
2. Familiarize yourself with the forklift on the terrain where it will be used.
3. Ensure that the Parking brake and the back-up alarm are working properly.
4. Drive at an appropriate speed for the conditions and the state of the terrain.
5. Slow down before executing a turn.
6. In all circumstances make sure you are in control of your speed.
7. On damp, slippery, or uneven terrain, drive slowly.
8. Slow down gently, never abruptly.
9. Do not drive with the parking brake on.
10. Always remember that hydrostatic type steering is extremely sensitive to movement of the steering wheel, so turn it gently and not erratic.
11. Never leave the forklift unattended while the engine is running.
12. Look in the direction of travel and always ensure you have good visibility of the route ahead.
13. When working at night ensure that your forklift is fitted with full beam lights.
14. Drive around obstacles.
15. Never move onto a foot bridge, floor or freight lift without being certain that they are prescribed for the weight and size of the forklift to be loaded.
16. The loaded forklift must not travel at speeds in excess of 7 m.p.h. (12 km/h).
17. Never move onto a loading platform without having first checked:
  - a. That it is suitably positioned and made fast;
  - b. That the unit to which it is connected will not shift;
  - c. That this platform is prescribed for the total weight or the forklift to be loaded;
  - d. That this platform is prescribed for the width of the truck.

**WARNING**

**Take extreme care when operating around platforms, trenches, recently dug and back filled terrain**

## Stopping the forklift

1. Before stopping the forklift after a long working period leave the engine idling for a few moments to allow the coolant liquid and oil to lower the temperature of the engine and transmission.
2. Never leave the ignition key in the forklift when it is unattended.
3. When the forklift is stationary place forks on the ground, and apply the parking brake.
4. Make sure the forklift is not stopped in any position that will interfere with the traffic flow and at least 6 ft. (1.8m) away from track of a railway.
5. Park the forklift on flat ground or on an incline lower than 15%.
6. Release the accelerator pedal and stop the lift truck.
7. Apply the parking brake.
8. Lower the forks to rest on the ground.
9. Stop the engine with the ignition switch.
10. Remove the pressure in the hydraulic circuits by using the hydraulic controls.
11. Remove the key.
12. If required to park on an incline park the forklift at a right angle to the slope set parking brake, & chock the wheels.

## Operating forklift on public highways

**WARNING**

**You must observe all highway codes when operating your forklift.**





# ***Bright Forklift***

**BD3-7570**

## **Load Capacities**

### **Loading Capacity @ 24" Load Center**

**7,000 lbs. - No Rotator**

**6,500 lbs. - With Rotator**

### **Loading Capacity @ 48" Load Center**

**3,500 lbs. - No Rotator**

**3,250 lbs. - With Rotator**



# Bright Forklift

**BD3-7570**

## LOAD HANDLING INSTRUCTIONS

### General

1. Do not attempt to perform any operation which exceeds the capacities of your lift truck or attachment.
2. Before lifting a load: check the size, weight, and condition of the load.
3. If the load is not properly marked, check with your supervisor for verification of weight. Divide the load into smaller unit if necessary.
4. Note the center of gravity of the load area where to place the forks for stable transport.
5. Verify that the load is properly wrapped or banded and safe to transport. Check the condition of the pallet or skid. Does it need to be replaced? If the load is of loose materials or is poorly wrapped, it must be made secure.
6. Secure the load so that it will not shift or fall during transport.
7. It is prohibited to increase the counterweight value in any way.
8. It is strictly prohibited to carry or to lift personnel with the forklift.
9. Never lift a load with a single fork.
10. Never lift a sling load with a single fork or with the carriage.

### Attachments

1. Ensure your lift truck's attachments function correctly.
2. Ensure that the attachment is correctly fitted and locked to its frame.
3. Adhere to the limits on the load chart for the lift truck and/or attachments.
4. Ensure that quick fit hydraulic connections on the attachment system are clean and protected.

**WARNING**

**You must consult your local electrical agency. You could be seriously injured if you operate near power cables**

### Environment

1. Take care when raising a load that no object or person is in the way of mast or forklift movement.
2. In the case of work near aerial lines, ensure that the safety distance is sufficient between the working area of the lift truck and the aerial line.
3. Do not allow personnel to come near the working area of the lift truck or pass beneath an elevated load.
4. When using the lift truck on a slope, before raising the forks ensure that the forklift is level and stable
5. Ensure that the loading platform or pile is capable of bearing the weight.
6. Ensure the stability and solidity of the ground before depositing the load.
7. When traveling on a longitudinal slope drive and brake gently. Move with load / forks facing uphill.

### Handling

1. Always consider safety. Only transport balanced and correctly secured loads to avoid any risk of tipping.
2. Fully engage forks under the load and transport in the low position approximately 12" (300mm) from the ground, with the mast sloping backwards.
3. Do not maneuver the forklift with the mast in the raised position except under exceptional circumstances and then only with extreme caution, at very low speed and using gentle braking. Ensure that visibility is adequate and get another person to guide you along if necessary.
4. Never shift the position of the load while the lift truck is in motion.
5. The simultaneous use of two forklifts to handle heavy or bulky loads is a dangerous maneuver, requiring specific precautions to be taken. This should only be done in exceptional circumstances and in the presence of a handling manager.
6. Never drive too fast or brake abruptly when carrying a load.



# Bright Forklift

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## Handling (cont.)

7. Check the load, particularly when turning corners and if it is very bulky.
8. Secure unstable loads.
9. Handle loads with caution at low speed, and without sudden jerks when moving them at significant heights and mast extension.
10. Do not change direction sharply and at high speed.
11. Apply the parking brake when lifting or depositing a difficult load or when on an incline.
12. Do not stop the forklift with the load in an elevated position.
13. Do not leave a laden forklift with the parking brake applied on an incline, which exceeds 15%.
14. High winds jeopardize the stability of the forklift.

**WARNING**

**In the event of the forklift overturning, do not try to leave the cabin during the incident. YOUR BEST PROTECTION IS TO STAY FASTENED IN THE CABIN.**

## Visibility

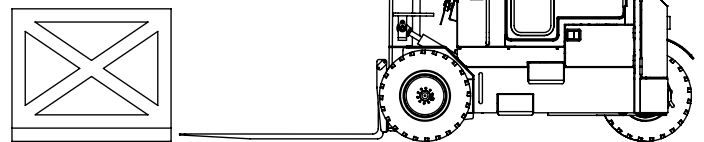
If the visibility in forward motion is not sufficient because of the bulkiness of the load, drive in reverse motion. Ensure you have good visibility.

## Check the placement area

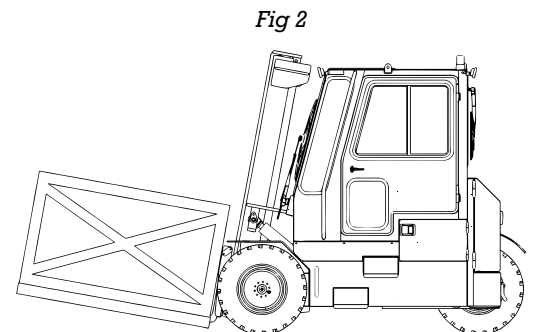
Before lifting or placing a load, check the area to be sure it will support the forklift and load?

## Lifting a load from ground level

1. Approach the load slowly, aligning the forklift and forks with the load. Stop the forklift before engaging the load. Using the control levers, align the forks to the correct height and angle. *Fig. 1*



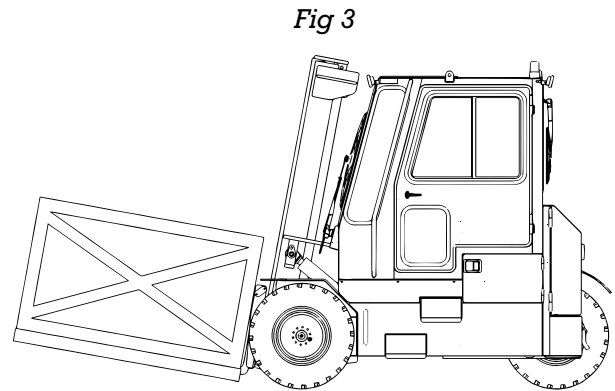
2. Move forward slowly, until the forks are fully engaged and the load is against the backrest. Raise the forks to lift the load. Tilt the mast back, placing the load against the backrest. Raise or lower the forks to transport position, side shift the mast to center the load as needed. *Fig. 2*



### Lifting a load from ground level

(cont.)

3. Check traffic, drive or back away slowly; watch your direction of travel and the stability of the load. Travel with caution at all times. *Fig 3.*



### Placing the load on ground level

1. Approach the receiving area slowly; stop the forklift to raise or lower or side shift the load as needed. Lower the forks and tilt the mast forward to place the load.
2. Before backing, insure the forks have properly disengaged the load, and that the load is stable. Check traffic and back away cautiously, assuring the forks remain clear of the load upon exit. When the forks have cleared the load; stop the forklift, raise/lower the forks and side shift the mast to center. Check traffic; proceed with caution at all times.

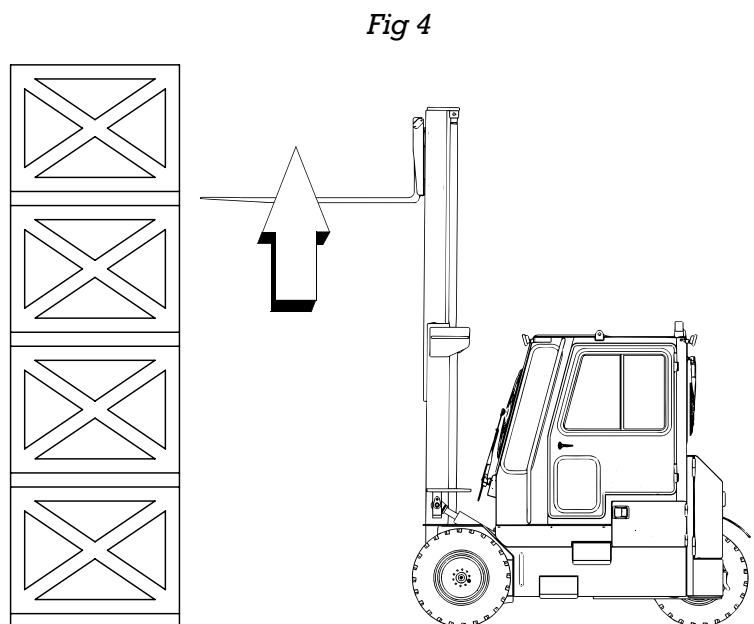
**WARNING**

**Never lift a load from a scaffold or deposit a load on one. Never side shift an elevated load. Never travel with an elevated load**

### Lifting an elevated load

An elevated load requires special handling, be extra cautious. Before unloading a truck or trailer, make sure its wheels have been chocked to prevent movement during operations.

1. Approach the loading area slowly with forks lowered, aligning the forklift with the load. Stop the forklift; raise the forks to the height of the load. Using the control levers, align the forks to the correct height and angle. *Fig 4.*



### Lifting an elevated load (cont.)

2. Move forward slowly, making adjustment as needed, until the forks are fully engaged and the load is against the backrest. Apply the park brake. Raise the forks just enough to lift the load. Tilt the mast back slightly with the heaviest part of the load against the backrest. *Fig 5.*

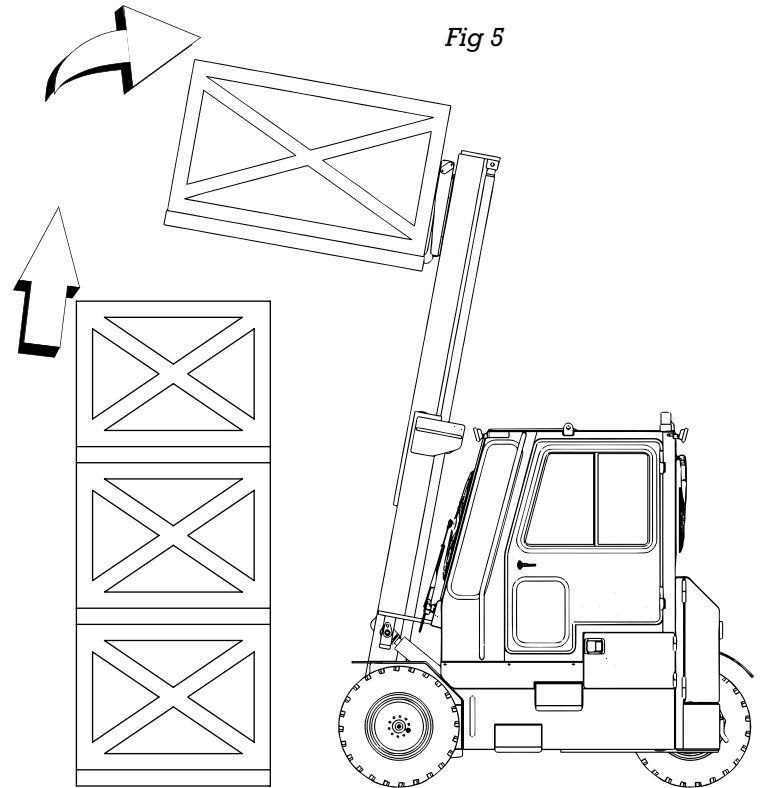


Fig 5

3. Retract the mast fully. Lower the load to transport position. Side shift the mast to center the load as needed.
4. Check traffic, release the park brake, place the forklift in reverse and cautiously back the forklift. Watch your direction of travel and the stability of your load. *Fig 6.*

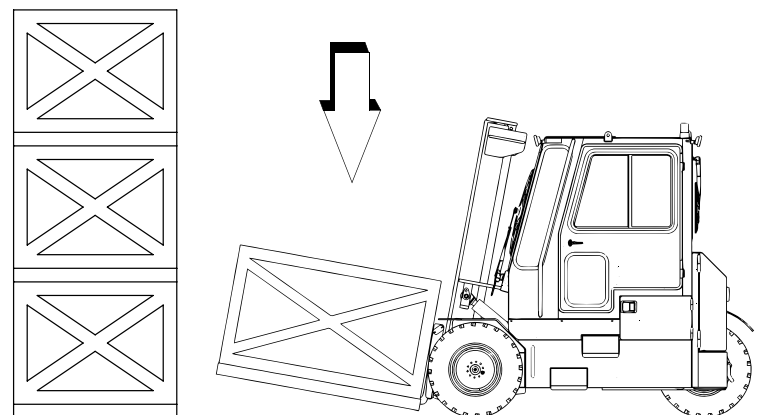


Fig 6

### Placing an elevated load

An elevated load requires special handling, be extra cautious. Before loading a truck or trailer, make sure its wheels have been chocked to prevent movement during operations.

1. Approach the loading area slowly, aligning the forklift and the load. When the load is properly aligned set the park brake. *Fig 7.*

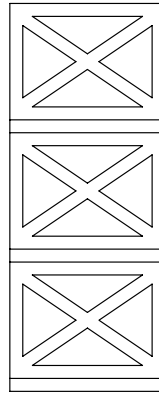
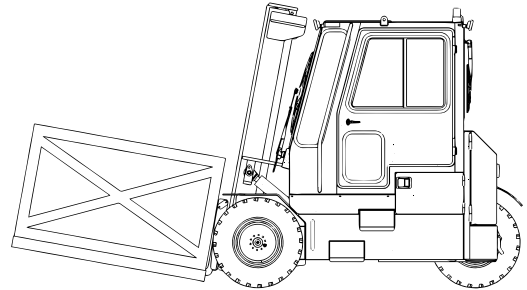
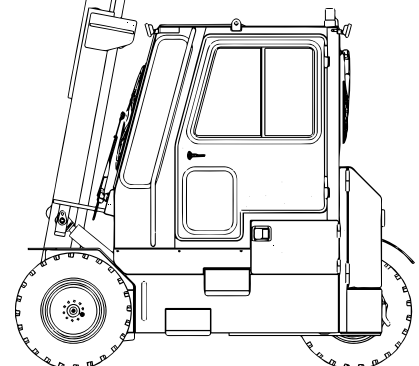
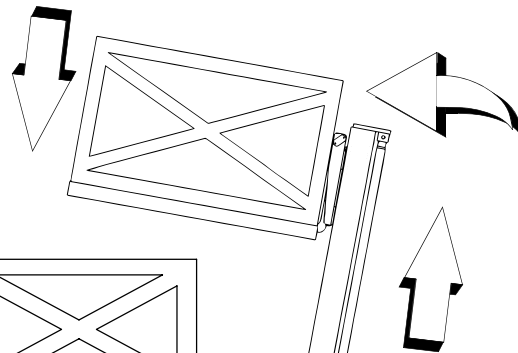
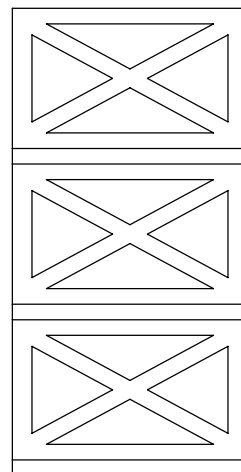


Fig 7



2. Raise the load high enough to clear the stack or platform. Align the forks to the correct angle and height for load placement. Move forward slowly making adjustments as needed, until the load is properly aligned. Lower the load into a stable position. *Fig 8.*

Fig 8



3. Make required adjustments to the forks to properly clear the load. Check traffic release the park brake, place the forklift into reverse, and back out slowly.
4. After clearing the load, lower the forks and side shift the mast to center as needed.
5. Check traffic; back away slowly. Travel with caution at all times.



# Bright Forklift

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## Double fork a load

The forklift capacity is reduced when the forks do not fully engage a load. On occasion it may be necessary to move or reposition a load before the forks can be fully engaged; this is called "DOUBLE FORKING". With the forklift properly positioned, raise the load slightly, bring the load backward. Lower the load into a stable position; move forward to fully engage the load. Never attempt to lift or "double fork" an unstable load.





# Bright Forklift

**BD3-7570**

## MAINTENANCE INSTRUCTIONS FOR THE BRIGHT'S FORKLIFT

### General maintenance

1. Read the operator's manual carefully and ensure you understand it.
2. Stop the engine, when an intervention is necessary.
3. Wear clothes suitable for the maintenance of the forklift; avoid wearing jewelry and loose clothes. Tie and protect your hair, if necessary.
4. Ensure the area is sufficiently ventilated if you need to run the forklift for test.
5. Carry out all repairs immediately, even if the repairs concerned are minor.
6. Repair all leaks immediately even if the leaks concerned are minor.
7. Do not attempt to loosen unions, hoses or any hydraulic component with the circuit under pressure.
8. Do not smoke or approach the forklift with a flame, when the fuel tank is open or is being filled.
9. Take care not to burn yourself from the exhaust, radiator, engine, etc.
10. Turn the main switch off.
11. Do not drop metallic items on the battery.
12. When carrying out electric welding work on the forklift, disconnect the battery, then connect the negative cable from the equipment directly to the part being welded; so as to avoid high-tension current passing through the bearings.

### Maintenance

1. The maintenance and the keeping in compliance of the forklift are compulsory.
2. Carry out daily maintenance.
3. Do not run the engine without air filter or with oil, water, or fuel leaks.
4. Change the filter cartridges: air, fuel, oil and hydraulic as required.

### Levels

1. Use the recommended lubricants.
2. Do not fill the fuel tank when engine is running.
3. Only fill up the fuel tank in areas specified for this purpose.
4. Do not fill the fuel tank to the maximum level.

### Washing

1. Clean the forklift or at least the concerned area before any intervention.
2. During washing avoid the articulations electrical components and connections.
3. Clean the forklift of any fuel, oil, or excess grease.
4. Protect all components susceptible to be damaged from water steam or cleaning agents.

**Note:** make sure that the disposal of process materials and of spare parts is carried out in total safety and in an ecological way.





# Bright Forklift

**BD3-7570**

## SERVICING SCHEDULE

### Every day or every 10 hours

1. Check the engine oil level.
2. Check the radiator fluid level.
3. Check the fuel level.
4. Check Hydraulic oil level.
5. Check the tire pressure and lug nut torque.
6. Check the mast chains tension.
7. Clean the air filter outer cartridge.
8. Clean the radiator, oil cooler, and screens.

**IMPORTANT**

### After the first 50 hours

1. Change the engine oil.
2. Change the engine oil filter.
3. Change the fuel filter cartridge.
4. Change the hydraulic pressure & return filters.

### Every 50 hours service

1. Check the battery.
2. Grease fitting on the rear wheel pivot, steering cylinder, rotator pivot (if equipped), side shift bushings, side shift cylinder and stabilizers.
3. Grease the rotating carriage sliding pads (if equipped).
4. Drain water / fuel separator.
5. Check fuel hoses and clamp bands.

### Every 200 hours

1. Change the engine oil and oil filter.
2. Check the engine oil separator element and change if necessary.
3. Change the Outer air filter element & inspect the inner air filter, replace if dirty.

**WARNING**

**Never clean the inner filter.**

4. Check and adjust the alternator belt tension.
5. Inspect the hydraulic tank breather cap.
6. Check air intake line.
7. Check radiator hoses.

### Every 400 hours (Or once a year if the forklift has not reached 400 hours of service)

1. Change the fuel filter and water/fuel separator cartridges.
2. Change pressure & return Hydraulic filters
3. Check the forks for wear.



# Bright Forklift

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## Every 800 hours

1. Change the hydraulic oil.
2. Replace the hydraulic tank breather cap.
3. Change the radiator fluid.
4. Drain and clean the fuel tank.
5. Clean and lubricate the pivot wheel bearing.
6. Change the Inner air filter element.
7. Check the wear on the rotator thrust pads and adjust if necessary (if equipped).
8. Check the wear on the mast rollers.
9. Check the engine mounts.
10. Check the engine valve clearance.
11. Check mast carriage.
12. Check the condition of the wheels and tires.
13. Check the hydraulic movement speeds.
14. Check the carriage attachments.
15. Replace the fan belt.

## Every 1500 hours

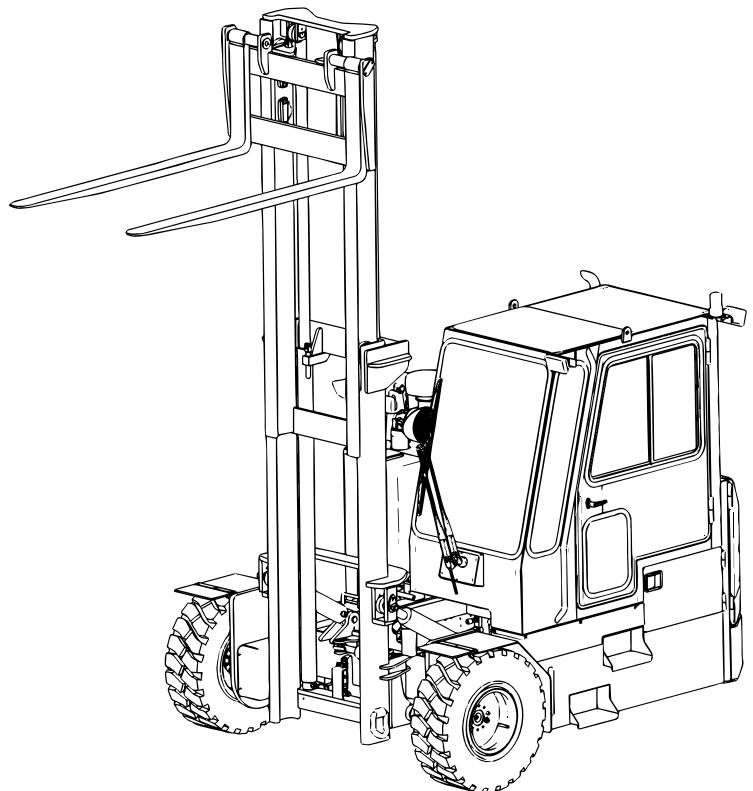
1. Check the engine EGR cooler.
2. Check the engine PCV valve.

## Every 2400 hours

1. Check the hydraulic circuit pressures and discharge rates.
2. Check the hydrostatic transmission circuit pressures.
3. Insure the transmission cut-off / Parking brake valve is in good working order.
4. Check the steering system.
5. Clean the hydraulic oil tank.
6. Check the engine fuel injectors.
7. Check and clean the radiator.
8. Check the water pump and thermostat.
9. Check the mast and carriage assemblies.
10. Check engine turbo charger.

## Every 4800 hours

1. Check the rear wheel motor pivot.
2. Check the steering pins and bushings.
3. Check the alternator and the starter motor.





# **Bright Forklift**

**BD3-7570**

## **FUEL AND LUBRICANTS**

### **Fuel**

The quality of fuel is an important factor in obtaining dependable performance. Satisfactory engine suitable fuels must be clean, completely distilled, well refined, and non-corrosive to fuel system parts. Be sure to use fuel of known quality.

### **Diesel Fuel Specifications**

Use grade No. 2-0 fuel, as defined by ASTM D 975 for diesel fuels. The grade No. 2-0 fuel is heavier and produces more work per gallon. Use fuel having less than 0.5% sulfur, preferably less than 0.05% For maximum filter life, sediment and water should not exceed 0.10 percent.

### **Storing Fuel**

The importance of proper fuel storage cannot be stressed too highly. To keep the fuel system in its most efficient condition, keep all dirt and other foreign matter out of the fuel. Avoid storing fuel for a long period of time Fill the tank at the end of each day's operation to prevent moisture from collecting and freezing in the fuel system.

### **Lubricants**

Effective use of lubricating oils and greases is perhaps the most important step towards low upkeep cost, long forklift life, and satisfactory service. Use only lubricants specified in this section; apply them at intervals and according to the instructions in the lubrication and periodic service section.

### **Mixing of Lubricants**

In general avoid mixing different brands or type of oil or grease. Oil and grease manufacturers blend additives in their oils to meet certain specifications and performance requirements. Mixing different oils can interfere with the proper functioning of these additives and degrade lubricant performance.



# Bright Forklift

**BD3-7570**

## Where to Check Fluid levels

Hydraulic oil level



Washer Fluid Level



Check oil level



Check coolant level



# Bright Forklift

**BD3-7570**

## Where to Check Fluid levels

Battery



Hydraulic Oil Fill

Hydraulic Return Filter





# Bright Forklift

**BD3-7570**

## CAPACITIES

<i>ITEM</i>	<i>CAPACITY</i>	<i>SUGGESTED</i>
Engine	2.96 gallons	CJ-4
Hydraulic oil Tank	25 gallons	ISO-46 Hydraulic fluid
General greasing	As needed	Semi-Synthetic lubricant with Molybdenum (5%)
Cooling circuit	2.5 gallons (approx.)	Water and anti-freeze*
Mast chains	As needed	30 Wt. non detergent motor oil
Fuel tank	33 gallons	Diesel No. 2 (ultra low sulfur)

\* Water and radiator cleaner can be used in the summer.

## BRIGHT PART NUMBERS FOR FILTERS



**097-20971**  
**Engine Fuel**  
**Water Separator**



**097-20965**  
**Outer Air Filter Element**



**097-20966**  
**Inner Air Filter Element**



**097-20287**  
**Hydraulic Pressure**  
**Oil Filter**



**097-24013E**  
**Hydraulic Return**  
**Oil Filter**



**097-24900**  
**Kubota Engine**  
**Fuel Filter**



**097-24901**  
**Kubota Engine**  
**Oil Filter**



# Bright Forklift

**BD3-7570**



## Bright Coop Inc.

803 W. Seale St. • Nacogdoches, TX 75964

Phone: (936) 564-8378 • Fax: (936) 564-3281

Email: [Info@brightcoop.com](mailto:Info@brightcoop.com)

### BRIGHT FORKLIFT

## WARRANTY AND LIMITATIONS OF LIABILITY

### COVERAGE PROVIDED

Bright Coop, Inc. (BCI) warrants every part of the forklift manufactured by BCI to be free under normal use and service from defects in material and workmanship. This warranty extends to the original purchaser only and shall continue for a period of 1 year (or 2000 hours) whichever occurs first on all components from the date of sale of the original purchaser or date of original use, whichever is earlier. In addition Kubota warrants it's engine for a period of 2 years/2000 hours whichever occurs first. Any such parts proving to be defective within the warranty period may be, at the option of BCI, either repaired or replaced, provided that such defective parts are returned freight prepaid to the BCI factory in Nacogdoches, Texas, and provided further that written notice of such defective parts shall be given to BCI at the address shown above within 10 days of discovery of such defects.

The obligation of BCI to the purchaser under this warranty is limited to the repair or replacement of defective parts, which will cover charges for both parts and labor, using BCI service parts. Repair or replacement in accordance with this warranty shall constitute fulfillment of all liabilities of BCI.

Repairs or replacements will be performed by a qualified BCI technician or may be repaired or replaced by the original purchaser's mechanic as long as the work or replacement is done in accordance with BCI recommendations. If the repair(s) or replacement(s) are done by the original purchaser's mechanic, BCI will reimburse the original purchaser for a reasonable amount of labor involved at the rate of \$30.00 U.S. currency per hour if the original purchaser or authorized employee of the original purchaser mails or faxes a copy of this form which includes the date of original sale, the serial and model number of the unit to be repaired, a description of failure, causal part, the nature of the defect and obtain a Repair Authorization from BCI.

### ITEMS NOT COVERED BY THIS WARRANTY

1. Parts not manufactured by BCI are not covered by this warranty and any warranty on such parts is limited to that extended by the original equipment manufacturer of such parts.
2. BCI makes no warranty whatsoever with respect to tires, tubes and batteries.
3. This warranty shall not apply:
  - a. If the forklift has been subject to misapplication, abuse, misuse, negligence, fire or other accident;
  - b. If parts not made or supplied by BCI have been used in connection with the forklift, if in the sole judgment of BCI such use affects its performance or reliability;
  - c. If the forklift has been altered or repaired in a manner which, in the sole judgment of BCI, affects its performance or reliability;
  - d. To incidental charges such as wrecker service, travel time, delivery charges, hydraulic oil, lubricants, fuel or anti-freeze;
  - e. To normal maintenance services (such as tune-ups, fuel system cleaning), to normal replacement of service items (such as filters), or to normal deterioration due to use or exposure (such as belts and exterior finish);
  - f. Unless all safety devices and guards provided with the equipment are properly installed and used in this operation and unless there is compliance with all operating procedures and maintenance instructions as set forth in the instructional and operating manuals furnished by BCI;
  - g. To any forklift if its serial number has been altered, defaced or removed, or if payment for the forklift is in default.



# Bright Forklift

**BD3-7570**

## DISCLAIMER OF IMPLIED WARRANTIES AND CONSEQUENTIAL DAMAGES

THERE ARE NO EXPRESSED WARRANTIES COVERING THE FORKLIFT MANUFACTURED BY BCI OTHER THAN AS SET FORTH ABOVE, AND THE WRITTEN WARRANTY IS IN LIEU OF ANY IMPLIED WARRANTIES, INCLUDING ANY IMPLIED WARRANT OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. In no event shall BCI be liable for special, incidental or consequential damages or claims therefore, including (but not limited to) damages or claims due to lost profits, lost time, transportation, personal injury, property damage or other expenses whether or not resulting directly or indirectly from claimed defects covered by the above written warranty. No person is authorized to make on behalf of BCI any representations beyond those expressed herein.

## RIGHT TO MAKE DESIGN CHANGES

Bright Coop, Inc. reserves the right to make changes in the design and other changes in its products at any time and from time to time without notice and without incurring any obligation with respect to any product previously ordered from it, sold or shipped by it.

## GENERAL PROVISIONS

All notices, demands, claims or other communications with respect to this written warranty must be addressed to Bright Coop, Inc., 803 W. Seale, Nacogdoches, Texas, 75964.

This warranty shall be interpreted and governed by the laws of the State of Texas.

I acknowledge that I have read and I accept this warranty and limitation of liability and that I have been instructed in safe operation of the Bright Forklift and furnished with an operating manual related to the Bright Forklift I have purchased.

Machine Model No: \_\_\_\_\_

Machine S/N: \_\_\_\_\_

Date of Sale: \_\_\_\_\_

Purchaser's Name: \_\_\_\_\_

Purchaser's Business: \_\_\_\_\_

Purchaser's Business Address: \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip Code \_\_\_\_\_

Purchaser or Authorized Agent's Signature of acceptance

\_\_\_\_\_

## DESCRIPTION OF FAILURE, CAUSAL PART, AND NATURE OF REPAIR OR REPLACEMENT SUMMARY

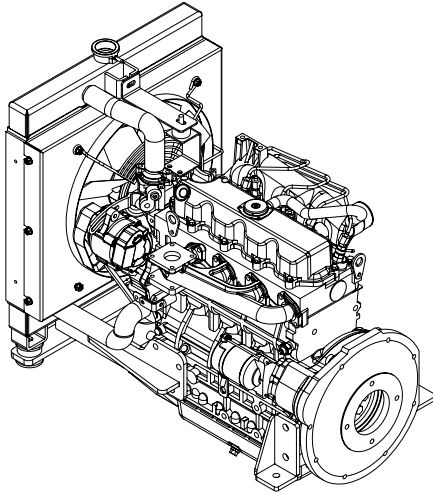
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# Bright Forklift

**BD3-7570**



## KUBOTA DIESEL ENGINE WARRANTY INFORMATION



### **IMPORTANT READ THIS PAGE & page 42,43**

Your KUBOTA Engine is Warranted directly by KUBOTA ENGINE AMERICA CORPORATION. In order to obtain Warranty repairs, you must deliver the product, together with proof of purchase, to an Authorized Kubota Industrial Engine Distributor or Dealer at your expense.

For all operation, service and maintenance information about the Kubota Engine, please refer to Kubota Diesel Engine Operator's Manual.



## KUBOTA ENGINE AMERICA CORPORATION LIMITED WARRANTY ON INDUSTRIAL ENGINES AND REPLACEMENT PARTS EFFECTIVE JANUARY 1, 2009

### OUR WARRANTY TO YOU

We warrant to you, the original purchaser, that all parts (except those referred to below) of your new Kubota industrial engine and replacement parts purchased from an Authorized Kubota Industrial Engine Distributor or OEM Distributor in the United States and Canada will be free from defects in materials or workmanship during the following periods.

1. Industrial Engines for 2 years or 2,000 hours, whichever occurs first.
2. Industrial Engines Major Component Warranty (MCW), 3 years or 3000 hours, whichever occurs first, parts only.

**MCW covers** cylinder block, cylinder head, crankshaft, camshaft, gears, pistons, rods, flywheel, flywheel housing, oil pump, pulleys, governor, intake manifold, oil pan, ignition distributor.

**MCW does not cover** rings, bearings, water pump, any electrical component, valve train components, accessory parts, seals, gaskets, carburetors, exhaust manifold, hoses, all fuel system components, muffler, any filters, radiator, fan, belts, thermostat, spark plugs, fuel transfer pumps.

3. Replacement parts for 1 year.

### WHAT WE WILL DO

We will, at our option, repair or replace any part covered by this warranty which becomes defective, malfunctions or otherwise fails to conform with this warranty under normal use and service during the term of the warranty at no charge for parts or labor. (Parts only for MCW)

### WHAT YOU MUST DO TO OBTAIN WARRANTY SERVICE

In order to obtain warranty repairs, you must deliver the product, together with proof of purchase, to an Authorized Kubota Industrial Engine Distributor or Dealer at your expense. The names and addresses of such Authorized Kubota Industrial Engine Distributors can be found on the internet at [www.kubotaengine.com](http://www.kubotaengine.com), by calling 1-800-532-9808 or by contacting:

Kubota Engine America Corporation  
505 Schelter Road  
Lincolnshire, IL 60069

### WHAT THE WARRANTY DOES NOT COVER

**This warranty does not cover:**

1. Damage, malfunctions or failures resulting from accidents, abuse, misuse, modifications, alteration, improper servicing, or lack of performance of required maintenance service.
2. Normal maintenance services or replacement of maintenance items such as light bulbs, preheater plugs, indicator and resistant coils, filter elements, lubricants, oils, spark plugs, coolant, or belts.
3. Installation of replacement parts, unless originally installed by an Authorized Kubota Industrial Engine Distributor or Dealer.
4. Non-genuine Kubota parts.
5. Any engines damaged by use of ether or any starting aid, or greater than a 50/50% solution of antifreeze and water.
6. Injection nozzle wear or any engine damage caused by injection nozzle wear or sticking.
7. Damage caused by water entering the engine due to any cause.
8. Used Products.
9. Any damage caused by overheating that is not a direct result of a defect in materials or workmanship.
10. Any Engine not application reviewed.

**APPLICATION REVIEW PROCESS:** The Kubota Engine America (KEA) application review process is intended to assist the OEM with engine installation to optimize functionality/performance within the OEM's equipment in order to maintain durability, customer satisfaction, and reduce warranty failures and expenses. Kubota cannot anticipate all potential failures and issues that may occur with the engine or product in the field during an application review. Therefore, machine durability testing by the OEM either in a test facility and/or in the field is critical to further reduce the potential for field failures.

The amount of time spent by KEA on an application review is significantly less than the amount of time spent by the OEM's design engineers on the application. Because of this, the KEA application review is intended to identify issues that are within the scope of the application review testing performed and in some cases recommend possible solutions. The KEA application review should never take the place of proper design and testing of the finished product by the OEM.

The KEA application review does not in any way express or imply any additional warranty coverage other than what is stated in Kubota's Limited Warranty Agreement. Kubota and its subsidiary companies are not responsible for (including, but not limited to): failures resulting from any components that are not manufactured by Kubota, misrepresented or incorrect information provided from an OEM, any changes made without KEA's knowledge, any decision by the OEM not to follow KEA's recommendations, or any application related problems or deficiencies that may arise that were not found by KEA's limited application review or the OEM's durability testing.

### THIS IS THE ONLY EXPRESS WARRANTY ON OUR PRODUCTS

We neither assume nor authorize anyone to assume for us any other express warranty. The Kubota Distributor/ Dealer has no authority to make any representation or promise on behalf of Kubota Engine America Corporation or to modify the terms or limitations of this warranty in any way.

### LIMITATIONS ON OUR RESPONSIBILITY WITH RESPECT TO PRODUCTS PURCHASED AND USED FOR PERSONAL, FAMILY OR HOUSEHOLD USE.

Our responsibility is to repair or replace defective parts as stated above. We will not be responsible for any other expenses, losses or inconvenience which you may sustain as a result of the purchase, use, malfunction or defective condition of our products. **ANY IMPLIED WARRANTIES INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE PERIOD SET FORTH ABOVE AND IN NO EVENT WILL WE BE LIABLE FOR ANY SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER.** Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

### LIMITATIONS ON OUR RESPONSIBILITY WITH RESPECT TO PRODUCTS USED FOR RENTAL OR FOR COMMERCIAL, INDUSTRIAL OR AGRICULTURAL PURPOSES.

This warranty is in lieu of all other warranties, express or implied, and of any other obligations or liability on our part. **IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED.** Our responsibility for any and all losses and damages resulting from any cause whatsoever, including our negligence, alleged damage or defective goods, whether such defects are discoverable or latent, shall be limited to the repair or replacement of defective parts as stated above. **IN NO EVENT WILL WE BE LIABLE FOR LOSS OF USE, LOSS OF PROFITS, LOSS OF OR DAMAGE TO OTHER PROPERTY, INCONVENIENCE, COMMERCIAL LOSS, OR OTHER SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES WHATSOEVER.**



# Bright Forklift

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## ITEMS NOT COVERED BY WARRANTY

1. Products that have been subjected to alteration, modification, neglect, unauthorized repairs or any diesel or gasoline product not Application Reviewed in writing by KEA or Distributor selling the Engine.
2. Products no longer owned by the original purchasers.
3. Products suffering shipping or freight damage, normal wear, accident, improper maintenance, or improper protection in storage.
4. Rental costs, cost of transport of product to the nearest servicing Distributor or Dealer's place of business and all telephone and fax communications.
5. Repairs necessary to correct any failures due to improper pre-delivery service and inspection by the selling Distributor or Dealer.
6. Repairs made necessary due to additions or modifications not recommended by Kubota Engine America.
7. Pressure or steam cleaning of products, cleaning of fuel system, flushing of cooling system, or solvent chemicals used to clean out lubrication system while engine is running or intact.
8. During a Warrantable Repair, coolant, oil, oil filters, fuel filters, drive belts and similar consumable parts may be replaced. Replacement of these parts is the owners responsibility unless the part was damaged or not reusable as a direct result of the Warrantable failure.
9. Electrical parts such as light bulbs, spark plugs, glow plugs, indicators or resistance coils, or any parts damaged by welding or jump-starting.
10. Any repeat or shop come-back repairs resulting from poor service work or improper diagnosis and testing. Replacement of parts as a trail-and-error method of diagnosis will not be considered for Warranty processing.
11. Damage caused by contaminated oil incorrect oil change intervals, incorrect oil viscosity or type, bad fuel, the use of any starting aids, the use of greater than or less than 50%/50% antifreeze/water or rust corrosion or scale build-up of the engine, cooling system and fuel system.
12. The replacement of complete assembly, unless prior approval has been granted by KEA. The following must be disassembled, tested and repaired as necessary: Injection Pumps, Injectors, Starters, Alternators, Ignition Distributors, Turbo Systems and complete Engines.
13. Freight for replacement parts.
14. Replacement parts other than those sold by Kubota Engine America (KEA) or its authorized Servicing Distributor or Dealer.
15. Any normal replacement and or service of Injection Pumps, Injector, or Injector Tips, the checking and or replacement of part(s) that fail due to impurities in the Fuel System, routine Fuel System maintenance and Fuel Filter replacement.
16. Damaged cause by water entering the Engine due to any cause.
17. Natural calamity such as fire, flood, etc.
18. Adjustments of any type.
19. Any damage caused by failure to immediately correct a known or suspected Engine or KEA accessory problem.
20. Any damage caused by a failure of an non-KEA accessory assembly or part.
21. Any damage caused by overheating that is not a direct result of a defect in materials or workmanship.
22. Excessive Diagnostic and or Cleaning time will not be paid under Warranty.



# *Bright Forklift*

**BD3-7570**

## TROUBLESHOOTING





# Bright Forklift

**BD3-7570**

## ENGINE TROUBLESHOOTING

This following pages list difficulties that might possibly be encountered and their possible remedies. If, after properly performing the listed remedies, the difficulty still exists, see your dealer. He has been trained and possesses the latest technical literature and equipment to put your forklift back in operating condition.

### ENGINE HARD TO START, WILL NOT START

<b>Possible Cause</b>	<b>Possible Remedy</b>
No fuel .....	Fill tank with proper fuel.
Fuel transfer pump primer lever left up.....	Move lever to lowest point of stroke.
Low battery output .....	Check electrolyte level and specific gravity of each cell.
.....	Recharge if necessary.
Excessive resistance in starting circuit-.....	Clean and tighten all connections on battery and starter.
Too-heavy viscosity crankcase oil .....	Drain and fill crankcase with oil of proper viscosity.
Improper fuel .....	Consult fuel specifications and use proper type of fuel for
.....	operating conditions.
Water, dirt, or air in fuel system .....	Drain, flush, fill, and bleed system.
Clogged fuel filter.....	Replace filter element and bleed system.
Circuit breaker for wiring open.....	Turn off lights and starter switches for one minute.
.....	(Circuit breaker will reset itself.).
Dirty or faulty injector nozzles.....	See your dealer.
Dirty or clogged fuel line filter .....	Drain tank and remove fuel shut-off valve and clean filter.

### ENGINE KNOCKS

<b>Possible Cause</b>	<b>Possible Remedy</b>
Insufficient crankcase oil .....	Add proper oil.
Dirt picked up by air intake system.....	Check air cleaner for clogging
Injection pump out of time .....	Check timing, See dealer for service.
Stuck fuel injector nozzle.....	See your dealer.



# Bright Forklift

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## ENGINE RUNS IRREGULARLY OR STALLS FREQUENTLY

Possible Cause	Possible Remedy
Low coolant temperature.....	If water temperature gauge is not in normal range.
Clogged fuel filter.....	Replace filter element and bleed system.
Water, dirt, or air in fuel system .....	Drain, flush, and refill. Bleed system.
Dirty or faulty injector nozzles.....	See your dealer.

## BELOW NORMAL ENGINE TEMPERATURE

Possible Cause	Possible Remedy
Defective thermostat.....	Replace with new thermostat.
Defective temperature gauge .....	Have serviceman replace gauge if defective.
.....	Check water with thermometer.

## LACK OF ENGINE POWER

Possible Cause	Possible Remedy
Engine overload.....	Reduce load or shift to lower gear.
Too high viscosity oil in crankcase.....	Drain and fill crankcase with oil of proper viscosity.
Intake air restriction .....	Clean air cleaner.
Clogged fuel filter.....	Replace filter element and bleed system.
High altitude operation	Engines loose horsepower with increased altitude. Use proper type of fuel for high altitude.
Overheated engine .....	See "Engine overheats" below.
Improper valve clearance .....	See "Engine valve tappet adjustment".
Dirty or faulty injector nozzles.....	See your dealer.
Injection pump out of time .....	Check timing, See dealer for service.
Obstruction in fuel system .....	See "Fuel system".



# Bright Forklift

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## ENGINE OVERHEATS

<b>Possible Cause</b>	<b>Possible Remedy</b>
Low coolant level.....	Fill radiator with coolant to the proper level. Check hoses and radiator for leaks or loose connections.
Dirty radiator core or grille screen .....	Remove all foreign matter from exterior of radiator core and grille screen.
Loose or defective alternator belt .....	Adjust belt tension. Replace worn belt.
Cooling system limed up .....	Drain and flush cooling system. Check water with thermometer.
Defective temperature gauge .....	Have serviceman replace gauge if defective. (If overheating, an engine must use water. Check water level.)
Defective radiator pressure cap.....	Replace cap.

## HIGH OIL CONSUMPTION

<b>Possible Cause</b>	<b>Possible Remedy</b>
Too low viscosity crankcase oil.....	Drain and fill crankcase with oil of proper viscosity.
Oil leaks.....	Check for leaks in lines and around gaskets and drain plugs.
Engine overheating.....	Reduce load or shift to lower gear.

## LOW ENGINE OIL PRESSURE

<b>Possible Cause</b>	<b>Possible Remedy</b>
Low crankcase oil level.....	Check crankcase oil level on dipstick and add oil if needed.
Improper type of crankcase oil .....	Drain and fill crankcase with oil of proper viscosity.
Partially plugged oil filter.....	Check pressure with a master gauge. Replace filter.



# Bright Forklift

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## HIGH FUEL CONSUMPTION

Possible Cause	Possible Remedy
Improper type of fuel.....	Consult fuel specifications and use proper type of fuel for operating conditions.
Engine overload.....	Reduce load or shift to lower gear.
Clogged or dirty air cleaner .....	Clean air cleaner.
Dirty or faulty injector nozzles.....	See your dealer.
Engine out of time.....	Make sure injector pump is timed properly. See your dealer for this service.

## DIESEL ENGINE EMITS BLACK OR GREY EXHAUST SMOKE

Possible Cause	Possible Remedy
Improper type of fuel.....	Consult fuel specifications and use proper type of fuel for operating conditions.
Engine overload.....	Reduce load or shift to lower gear.
Clogged or dirty air cleaner .....	Clean air cleaner.
Dirty or faulty injector nozzles.....	See your dealer.
Engine out of time.....	Make sure injector pump is timed proper. See your dealer for this service.
Defective muffler.....	Check muffler for possible damage, which might create back pressure.

## DIESEL ENGINE EMITS WHITE SMOKE

Possible Cause	Possible Remedy
Dirty air cleaner .....	Clean air cleaner.
Improper type of fuel.....	Low octane fuel will cause misfiring. Use only fuel which has recommended octane number.
Cold engine .....	Warm up engine to normal operating temperature.
Defective thermostat.....	Remove and check thermostat.
Engine out of time.....	Make sure injector pump is timed proper. See your dealer for this service.





# Bright Forklift

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## BATTERY WILL NOT CHARGE

Possible Cause	Possible Remedy
Loose or corroded connections .....	Clean and tighten battery connections.
Sulfated or worn-out battery .....	Check specific gravity and electrolyte level of battery.
Loose or defective alternator belt .....	Adjust belt. Replace if worn.

## STARTER INOPERATIVE

Possible Cause	Possible Remedy
Loose or corroded connections .....	Clean and tighten battery connections.
Low battery output .....	Check specific gravity and electrolyte level of battery.

## STARTER CRANKS SLOWLY

Possible Cause	Possible Remedy
Loose or corroded connections .....	Clean and tighten battery connections.
Low battery output .....	Check specific gravity and electrolyte level of battery.
Too low viscosity crankcase oil .....	Drain and fill crankcase with oil of proper viscosity.

## ENTIRE HYDRAULIC SYSTEM FAILS TO FUNCTION

Possible Cause	Possible Remedy
Low oil supply .....	Fill system with proper oil to mark on sight gauge.
Main coupling is broken .....	Replace main coupling.

## HYDRAULIC OIL OVERHEATS

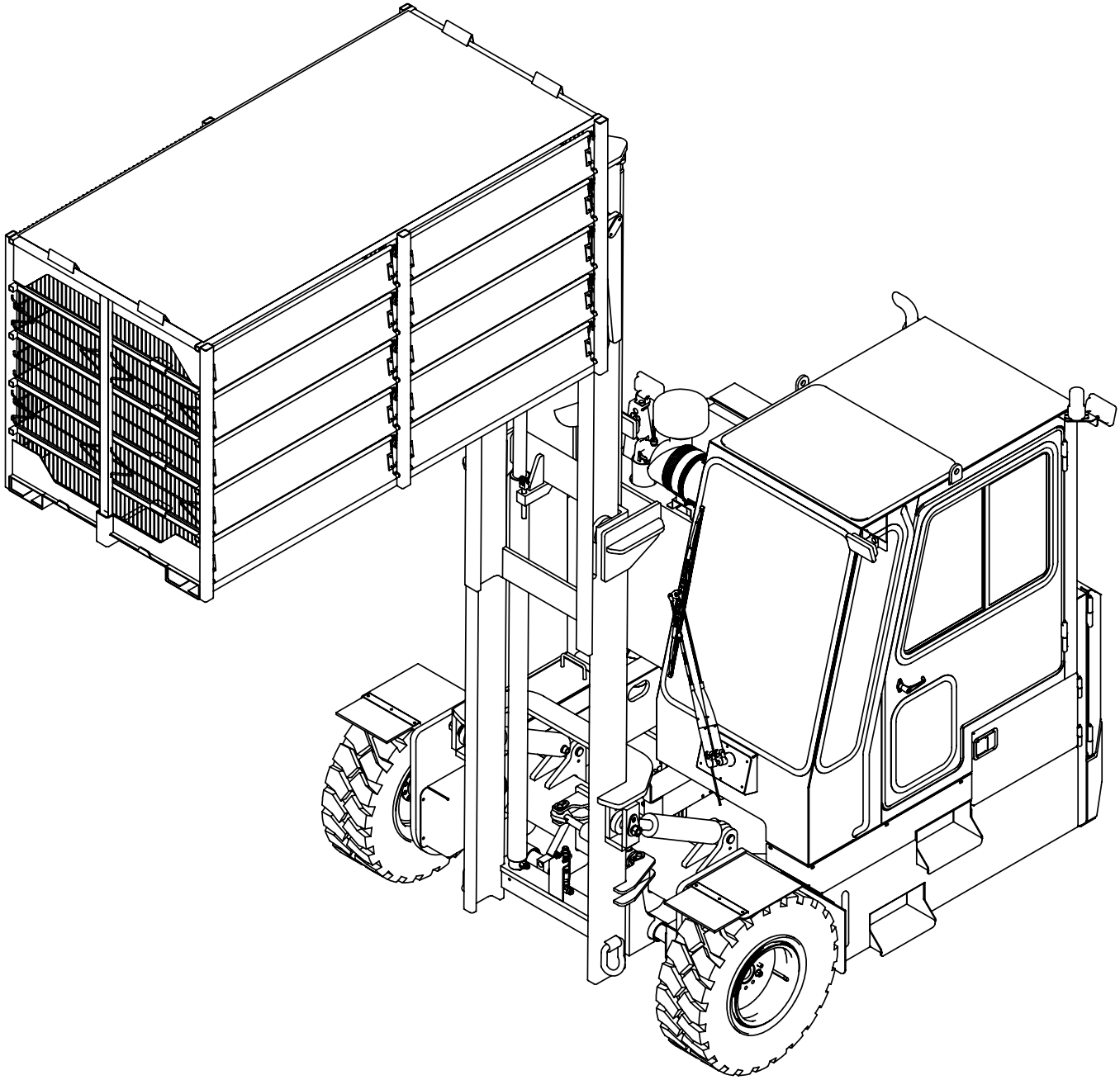
Possible Cause	Possible Remedy
Low oil supply .....	Fill system with proper oil to mark on dipstick.
Oil cooler core clogged .....	Remove foreign matter from oil cooler and grille screens.



# Bright Forklift

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## MAST TROUBLESHOOTING GUIDE





# Bright Forklift

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## MAST TROUBLESHOOTING GUIDE

The Troubleshooting Guide found on the following pages addresses problems sometimes encountered during mast operations. It also lists the probable causes and recommended corrective actions to restore the mast to its proper operating condition. Before repairing a faulty mast, read all safety precautions!

# WARNING

- 1. IF A MAST RAIL OR CARRIAGE BECOMES JAMMED OR HUNG-UP; REMOVE THE MAST FROM SERVICE, MAKING NECESSARY REPAIRS IMMEDIATELY!**
- 2. USE ONLY THE APPROPRIATE TOOLS AND APPROVED HOST/HARNESS DURING MAST REPAIR OR ADJUSTMENTS!**
- 3. NEVER PLACE ANY PART OF YOUR BODY INSIDE THE WORKING AREA OF A JAMMED MAST!**
- 4. DO NOT OPERATE THE MAST WITH A DAMAGED HYDRAULIC SYSTEM.**

## MAST SAFETY PRECAUTIONS

**IMPORTANT:** BEFORE YOU OPERATE THE MAST MAKE SURE YOU HAVE READ AND FULLY UNDERSTAND THE MANUFACTURER'S MANUALS FOR YOUR FORKLIFT IF THE MANUALS ARE MISSING, GET A REPLACEMENT MANUAL FROM YOUR EMPLOYER, DEALER OR FORKLIFT MANUFACTURER. KEEP SAFETY MANUALS ON THE FORKLIFT AT ALL TIMES.

### SAFETY IS YOUR RESPONSIBILITY!

- **ONLY YOU CAN PREVENT SERIOUS INJURY OR DEATH FROM UNSAFE PRACTICES! PRACTICE ALL USUAL AND CUSTOMARY SAFE WORKING PRECAUTIONS, INCLUDING THE FOLLOWING:**
  1. NEVER CARRY PASSENGERS ON THE MAST OR FORKS!
  2. Never use the mast or forks as battering rams.
  3. Make daily inspections of the mast's performance, components, hydraulics and hose connections.
  4. Avoid entanglement hazard, keep yourself and others away from the mast's moving parts.
  5. DO NOT climb on the mast.
  6. If the mast does not operate properly, have it inspected and repaired immediately.
  7. Do not operate the Mast without a legible load chart (do not over-load the mast).
  8. Replace forks (in pairs) that are cracked or damaged, NEVER use forks repaired by welding.
  9. Check that the forks are secure (unable to change position while carrying loads).
  10. Plan ahead, know how and where you will travel, turn and pickup, lift and place loads.
  11. Use a signal person when placing high loads.
  12. Operate the mast smoothly, (raising, lowering, and tilting of mast and forks), do not allow the lift cylinders to hit the end of their stroke abruptly.
  13. Lower the forks to the ground when the Forklift is not in use.



# Bright Forklift

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PROBLEM:	PROBLEM CAUSE:	CORRECTIVE ACTIONS:
Forks fail to hold up or lowers too rapidly.	<ol style="list-style-type: none"> <li>1. Oil leaking past cylinder head.</li> <li>2. Oil leaking past control valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. See your dealer.</li> <li>2. See your dealer.</li> </ol>
Forks lift too slowly.	<ol style="list-style-type: none"> <li>1. Cold oil.</li> <li>2. Viscosity of oil too high.</li> <li>3. Insufficient engine speed.</li> <li>4. Badly worn pump.</li> <li>5. Leaking or broken lines from control valve to cylinders.</li> <li>6. Dirty oil.</li> <li>7. Oil leaking past cylinder piston seal.</li> <li>8. Oil leaking past control valve.</li> </ol>	<ol style="list-style-type: none"> <li>1. Allow oil to warm up with slow engine speed.</li> <li>2. Use oil of proper viscosity.</li> <li>3. Open throttle.</li> <li>4. Repair or replace pump. See your dealer.</li> <li>5. Check for leaks. Tighten or replace lines.</li> <li>6. Drain and refill with new oil.</li> <li>7. See your dealer.</li> <li>8. See your dealer.</li> </ol>
Pump makes noise.	<ol style="list-style-type: none"> <li>1. Starvation.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check for low oil supply.</li> </ol>
Mast will not lift load or lift cylinder does not move.	<ol style="list-style-type: none"> <li>1. Mast overloaded.</li> <li>2. Insufficient or no oil flow supplied to the cylinder.</li> <li>3. Relief valve setting too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Reduce the load.</li> <li>2. Check the truck's hydraulic system: low oil level, defective pump, damaged control valve or leaks in supply line. Make repairs as required.</li> <li>3. Adjust relief valve, do not exceed recommended setting.</li> </ol> <p><b>NOTE:</b> Anytime oil is added to the hydraulic tank, check the lift cylinders for air, they may need to be bled.</p>



# Bright Forklift

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PROBLEM:	PROBLEM CAUSE:	CORRECTIVE ACTIONS:
<p>Mast lifts load slowly or to partial height.</p>	<ol style="list-style-type: none"> <li>1. Low on oil.</li> <li>2. Mast cylinder seal failure.</li> <li>3. Relief valve setting too low.</li> <li>4. Mast rollers shimmed too tight, rails are off center or not lubricated, defective rollers.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check the truck's hydraulic system: low oil level, defective pump, damaged control valve or leaks in supply line. Make repairs as required.</li> <li>2. Replace the seals. Failure caused by oil contamination requires the system be flushed, filters be replaced and fresh oil installed.</li> <li>3. Adjust relief valve, do not exceed recommended setting.</li> <li>4. Check rollers and rail alignment. Repair, adjust or lubricate as necessary.</li> </ol>
<p>Mast jerks or has spongy movement.</p>	<ol style="list-style-type: none"> <li>1. Air in the hydraulic system.</li> <li>2. Bent or damaged cylinder rod (piston).</li> <li>3. Defective relief valve.</li> <li>4. Rollers defective or shimmed too tight.</li> </ol>	<ol style="list-style-type: none"> <li>1. Check hydraulic oil level in the tank, check for vacuum leaks in the hydraulic system. Bleed the lift cylinders.</li> <li>2. Repair or replace as necessary.</li> <li>3. Remove and inspect the relief valve, repair or replace as necessary. If damaged by contaminated oil: flush the system, replace the oil filters and add fresh oil.</li> <li>4. Re-shim or repair as needed.</li> </ol>



# Bright Forklift

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PROBLEM:	PROBLEM CAUSE:	CORRECTIVE ACTIONS:
Mast drifts down slowly on its own.	1. Damaged or defective seals.	1. Replace the seals. Failure caused by oil contamination requires the system be flushed, filters be replaced and fresh oil installed.
Mast lowers too slowly, partially or not at all. <b>Notice! See WARNING at the beginning of the Troubleshooting Guide.</b>	1. Damaged lift cylinder(s). 2. Rollers defective or shimmed too tight.	1. Inspect, repair or replace. 2. Re-shim or repair as needed.
Carriage drifts up when load is removed, then stops.	1. Air in cylinder(s).	1. Bleed the Cylinder(s).
Cylinders leak oil.	1. Faulty seals or "O" rings.	1. Replace seals or "O" rings.
Mast does not fully extend.	1. Hydraulic oil tank low.	1. Fill tank to proper level.
Excessive side movement in rails.	1. Rollers need adjustment or repair.	1. Shim or replaced rollers as required.
Excessive side movement in Carriage.	1. Rollers need adjustment or repair.	1. Adjust the side play.
Carriage or rails hang-up or bind during operation. <b>Notice! See WARNING at the beginning of the Troubleshooting Guide.</b>	1. Rollers need adjustment or repair.	1. Shim or replaced rollers as required. 2. Adjust the carriage side play.



# Bright Forklift

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PROBLEM:	PROBLEM CAUSE:	CORRECTIVE ACTIONS:
Carriage is hitting or scraping the rails.	<ol style="list-style-type: none"> <li>1. Carriage rollers improperly shimmed or worn excessively.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust or replace the carriage rollers.</li> </ol>
Mast out of sequence on ascent, rails move before the carriage.	<ol style="list-style-type: none"> <li>1. Carriage travel is obstructed.</li> <li>2. Carriage thrust rollers damaged or need adjustment.</li> <li>3. Carriage rail rollers damaged or need adjustment.</li> <li>4. Load excessively off center.</li> </ol>	<ol style="list-style-type: none"> <li>1. Remove obstruction.</li> <li>2. Adjust or replace the thrust rollers.</li> <li>3. Adjust or replace the rail rollers.</li> <li>4. Center the load on the carriage.</li> </ol>
Mast out of sequence on descent, the carriage lowers before the rails retract.	<ol style="list-style-type: none"> <li>1. Rails are shimmed too tight.</li> <li>2. Center rail shimmed too tight in the outer rail.</li> <li>3. Obstruction or debris.</li> <li>4. Broken roller.</li> <li>5. Defective flow regulator in the lift cylinder(s).</li> </ol>	<ol style="list-style-type: none"> <li>1. Re-shim the rails as required.</li> <li>2. Re-shim the rails as required.</li> <li>3. Remove any obstruction or debris.</li> <li>4. Replace roller.</li> <li>5. Replace the regulator.</li> </ol>
Excessive wear on one inner rail only.	<ol style="list-style-type: none"> <li>1. Carriage roller on opposite side is broken.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace the roller, clean and lubricate the rail.</li> </ol>

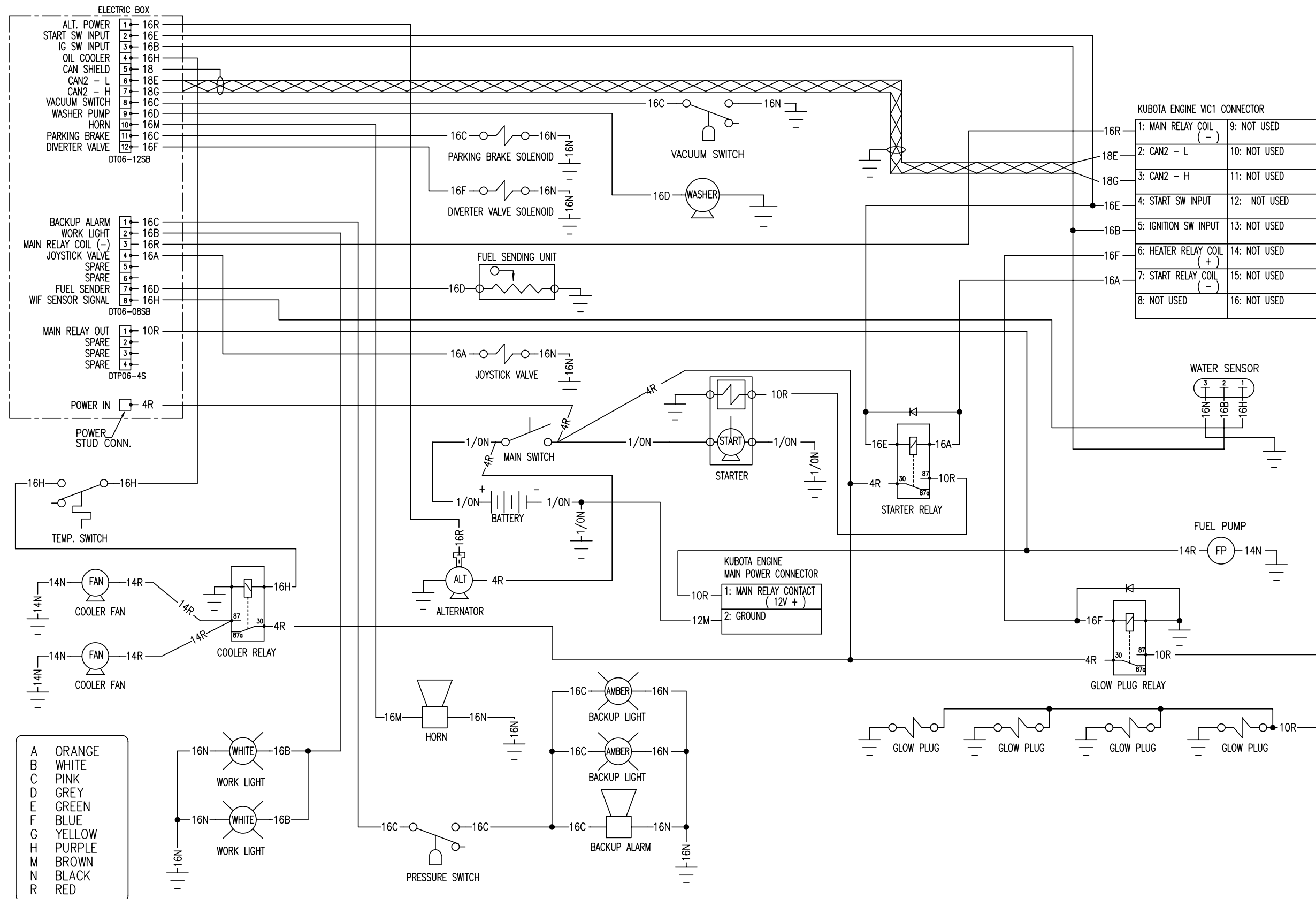


# ***Bright Forklift***

***BD3-7570***

## **SCHEMATICS**





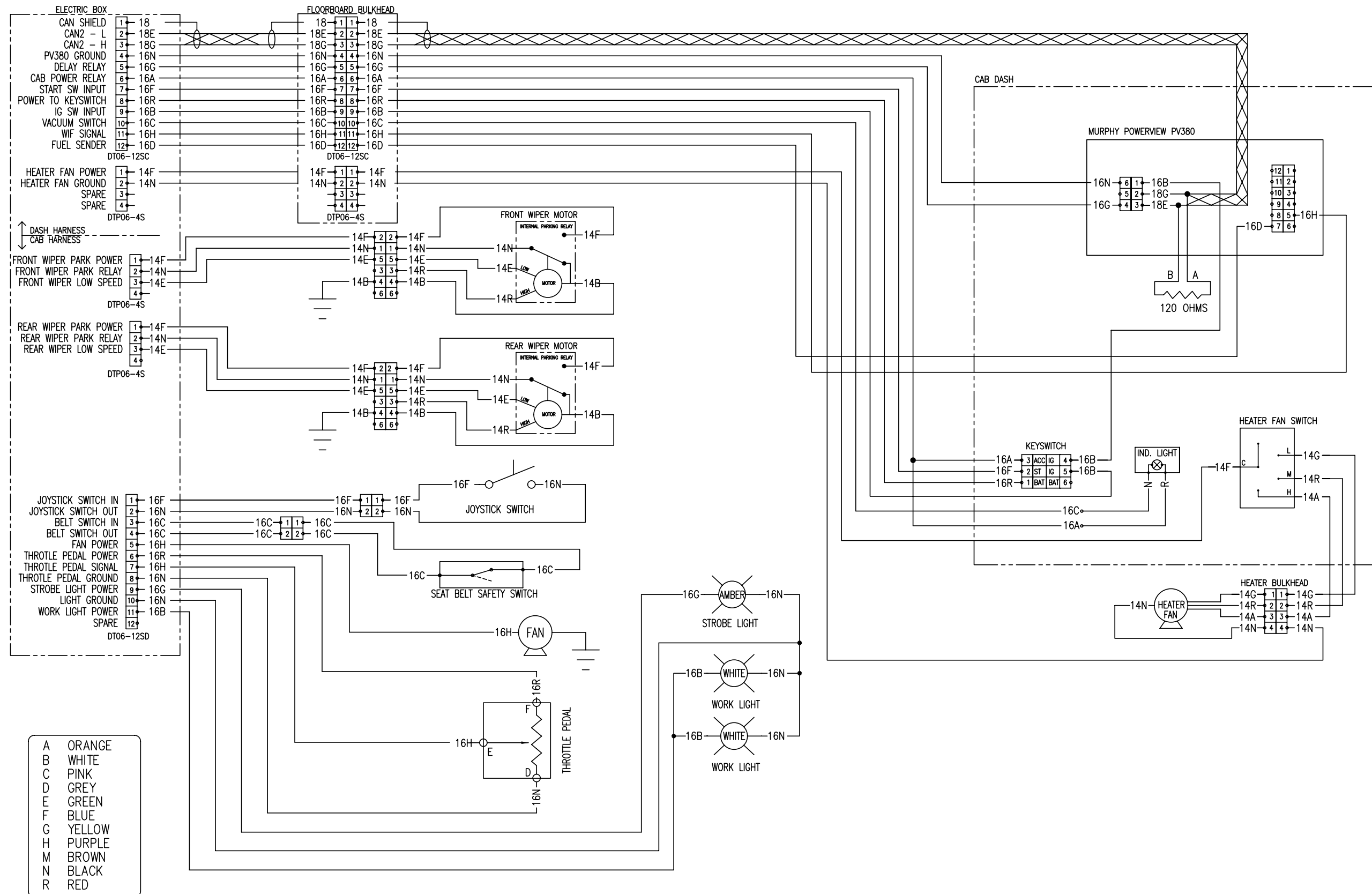




# Bright Forklift

## ELECTRICAL SCHEMATIC FOR OPERATOR CAB

**BD3-7570**



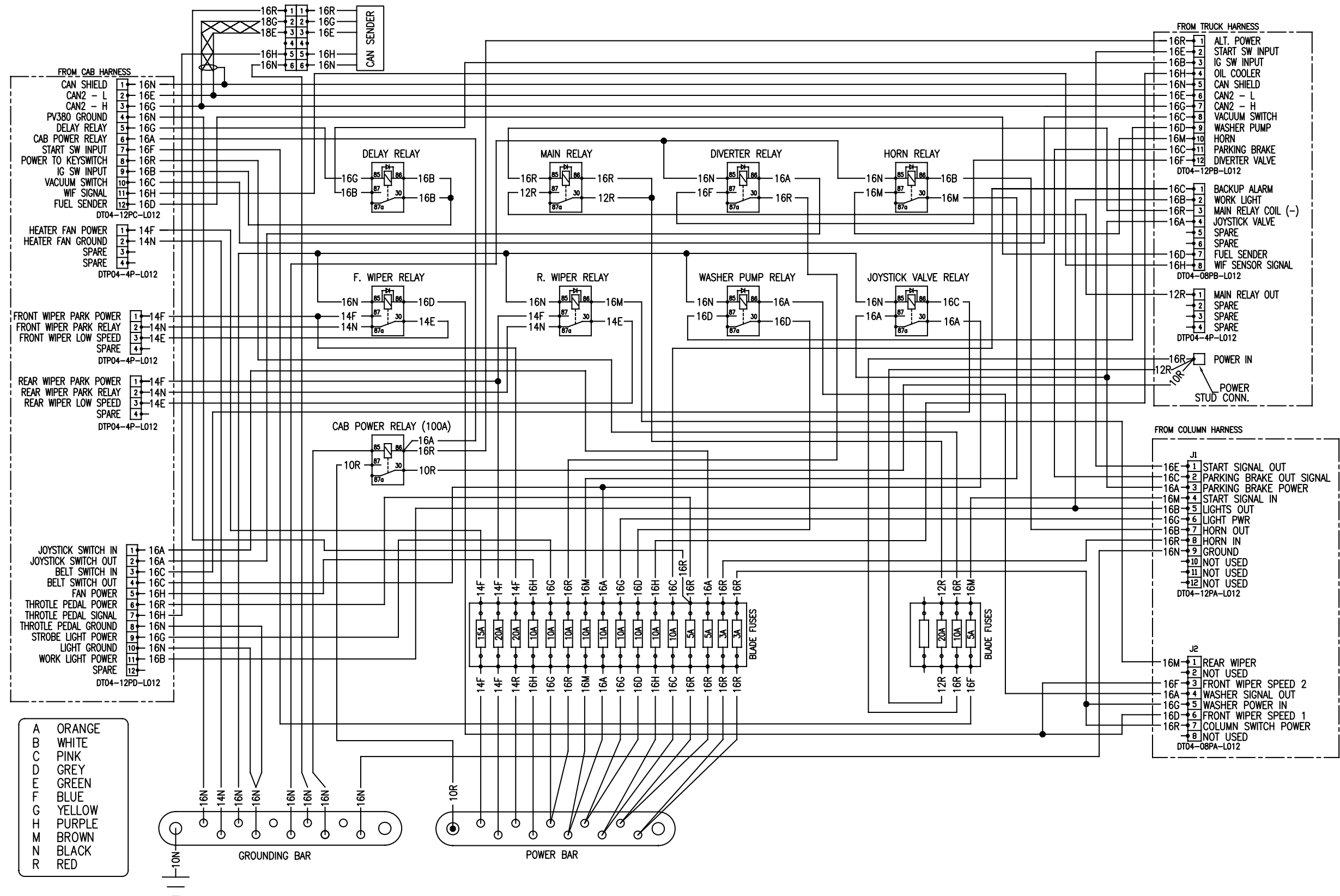




# Bright Forklift

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## ELECTRICAL SCHEMATIC FOR ELECTRICAL BOX



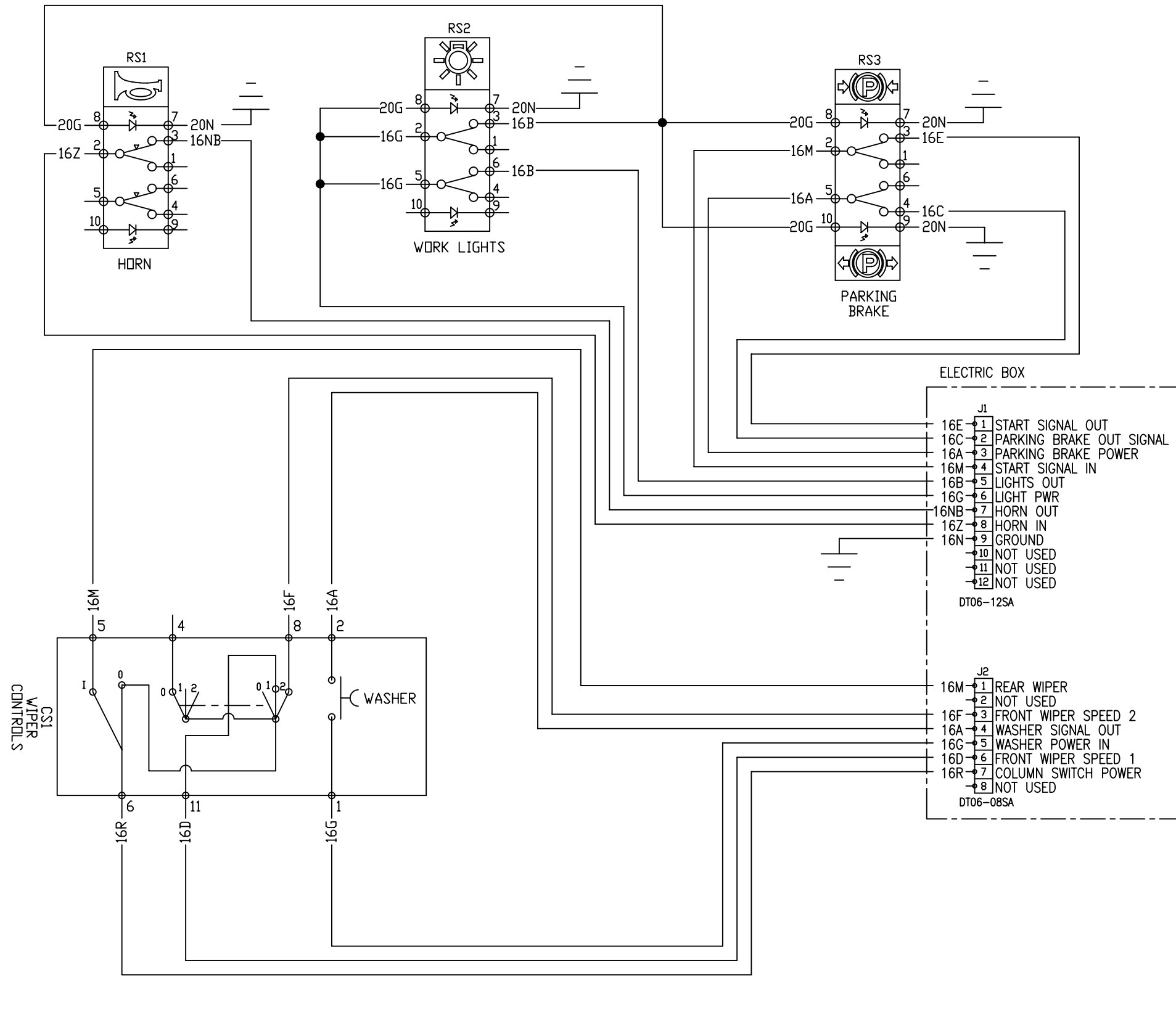




# Bright Forklift

BD3-7570

## ELECTRICAL SCHEMATIC FOR COLUMN



- |   |            |
|---|------------|
| A | ORANGE     |
| B | WHITE      |
| C | PINK       |
| D | GREY       |
| E | GREEN      |
| F | DARK BLUE  |
| G | YELLOW     |
| H | PURPLE     |
| M | BROWN      |
| N | BLACK      |
| R | RED        |
| Z | LIGHT BLUE |



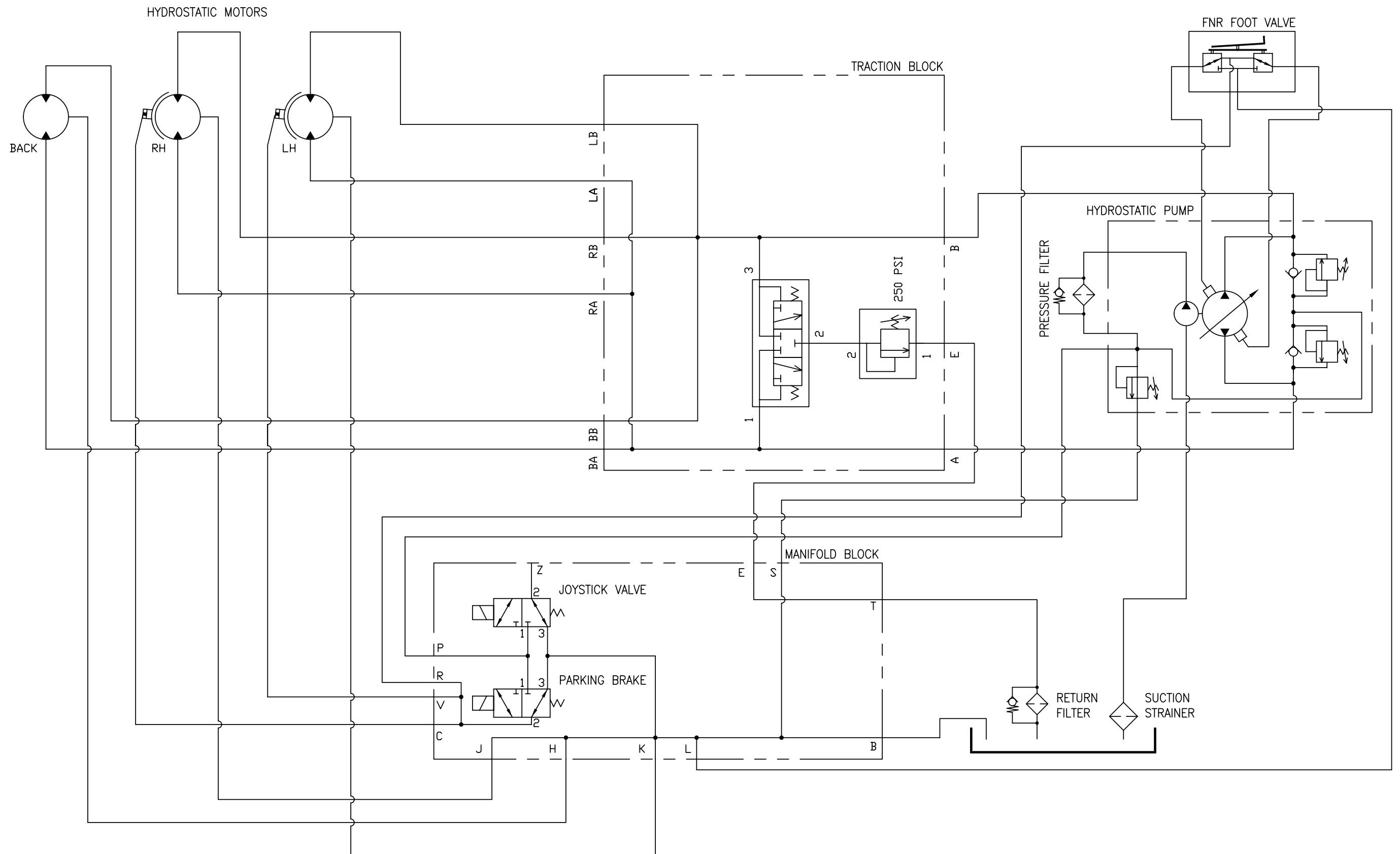




# Bright Forklift

BD3-7570

## HYDRAULIC SCHEMATIC FOR TRACTION







# Bright Forklift

## HYDRAULIC SCHEMATIC EXCLUDING TRACTION

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