

Operation Manual

Mucross Lift

Model MUL30 (P)

Model MUL30E (P)

Model MUL30H Alignment (P)

Dear Users,

Thank you for purchasing our Bishamon Mucross lift. Before using the lift, read through and be familiar with this manual. Fully understand the precautions, directions, and other information contained in this manual to ensure correct use. Failure to do so may result not only in insufficient performance of the lift but also in falling of the vehicle, serious injury and death, and damage to properties.

Keep this manual in a safe place for future reference. In case of loss, immediately request a new copy.

If the product is supplied with a wrong manual, contact your lift supplier for a correct copy.

About Maintenance Inspection :

Perform periodic maintenance inspection of the lift to ensure safe work with the lift and keep the lift fully functional.

Preface

Thank you for purchasing our Bishamon Multi & Mucross lift. Before using the lift, read through and be familiar with this manual. Fully understand the precautions, directions, and other information contained in this manual to ensure correct use. Failure to do so may result not only in insufficient performance of the lift but also in falling of the vehicle, serious injury and death, and damage to properties.

The contents of the manual may differ when the purchased lift is modified. For any question about the product or this manual, feel free to contact your lift supplier.

Keep this manual in a safe place for future reference. In case of loss, contact your lift supplier and request for a new copy immediately.

Explanation of Terms and Symbols

In this manual, 「**Danger**」, 「**Warning**」, 「**Caution**」 are defined and specified as below. Notice of Warnings are very important for safe operations. As these are very Important to protect operators from accidents resulting in personal injury and death, and damage to property, so make sure to read thoroughly and understand fully before operation.



Danger Incorrect operation may imminently result in serious injury or death of the operator.



Warning Incorrect operation may result in serious injury or death of the operator.



Caution Incorrect operation may result in injury and damage to the property. The occurrence of the danger is lower than "Warning" articles.

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1. Intended Use

This product is a lift to be used for oil and parts replacement, general maintenance, motor vehicles inspection and maintenance etc. of mini-to ordinary sized passenger cars, small sized trucks, and the like.

2. Danger, Warning, Caution

Caution for Safety

As there are very important to protect operators from accidents which may result in injury and death, and damage to cars and properties, make sure to understand fully before operating lift.

2.1 General Safety Rules to be observed

1. Read and be familiar with the operation manual before operating.
2. Only trained operators are allowed to use the lift.
3. Make sure to perform daily and periodic inspections in accordance with the instructions of Operation Manual.
4. If any abnormal conditions, such as noise, occur during operation, prohibit the use of the lift and contact lift supplier for an inspection.
5. This lift is designed for motor vehicle servicing. DO NOT use for any other purposes.
6. Do not remove any labels and do not modify the lift anyway.

2.2 Caution in Operation

The meaning of the mark (symbol) used behind pictures are as below.






The specified act that **should not** be conducted.



The specified act that **should** be conducted.



Warnings and cautions that are possible to occur due to incorrect operation.

 Danger	
	When lift is operating, DO NOT get under the vehicle. DO NOT allow others to get under vehicle Or it may result in death or serious injury.
	If the Vehicle STARTS TO FALL FROM LIFT , Move away quickly DO NOT attempt to support vehicle. Or it may result in death or serious injury.

⚠ Warning



Read the Operation Manual thoroughly before using the lift.
Important Warnings are described.
*Incorrect operation may result in an accident.



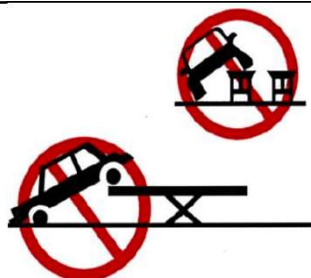
DO NOT lower the lift while any stand or support is in position under vehicle.
DO NOT use "Down" motion of lift to push parts into position.



Drive in vehicle straight and parallel to the lift. Vehicle **MUST BE** positioned evenly.



Set the supporters on a flat spot with sufficient strength. Or supporters may come off and vehicle may fall.



DO NOT lift vehicles by one end only. Or it may result in fall of the vehicle and damage lift.



DO NOT modify any Safety Device of the lift under any circumstances.



KEEP FEET CLEAR
When lowering lift, make sure to keep feet clear of hoist and vehicle.



Apply parking brake and position wheel stop when operating lift.



Vehicle **MUST BE** positioned evenly. **DO NOT** lift up offset vehicle. Or it may result in fall of vehicle



DO NOT use lift unless you have been trained in it's operation.
*Incorrect operation may result in an accident.



KEEP HANDS and **FEET CLEAR** when raising and lowering lift, **MAKE SURE** to keep hands and feet clear of any scissor mechanism.



ELECTRICAL HAZARD!
DO NOT open control box or remove cover plates without isolating electrical supply.



Caution

Carefully read and fully understand this manual before using the lift.

<Pre-Operation Check>

1. This lift is designed for motor vehicle servicing. **DO NOT** Use for other purpose.
2. If any of safety device does not work properly, **DO NOT** use lift.
3. Drive in and out vehicle slowly, and **DO NOT** start and stop suddenly.
4. Pay attention in driving in and out vehicle when tires and drive-on plate are wet to avoid slipping.

<Lift-Up/Down Operation>

1. When operating the lift, pay constant attention to the area around the vehicle and the lift. **NEVER** look aside during operation.
2. If there are other lifts installed in the same site, **Pay attention** not to operate the control switch of other lifts.
3. **DO NOT** lift any vehicle exceeding the maximum capacity of the lift.
4. **DO NOT** lift vehicles with passengers, baggage or cargo etc. inside.
5. Use only genuine Side Sill Block supporter between upper lift top plate and vehicle lifting point when lifting vehicle by upper lift.
6. Make sure there is no oil or dirt on supporter when lifting vehicle by upper lift.
7. Stop lifting after supporter have made firm contact with vehicle, and check locations of supporter for correct lifting points before reraising the vehicle.
8. Stop lifting when lift reached maximum height.
9. During lift lowering operation, wait 1 or 2 seconds before proceeding next lowering operations
10. The lift height of both sides may become unbalanced during lifting and lowering operations. In such case, follow the instructions of Operation Manual and balance the height of both sides. If not correcting the unbalance situation, it may result in the fall of the vehicle.
11. If the Jacking Beam is used with Pit Installation Model, **DO NOT** lower the Lower Lift below 350mm height. Make sure to slide and stow the Jacking Beam into hangar before relowering lift to floor.
12. If the lift would not lower, raise the lift and then relower.
13. Make sure lift and lift supporters are fully lowered before driving in or out vehicle.
14. Before lowering the lift, ensure that no person or objects is around vehicle or lift.
15. **DO NOT** operate the lift with anything such as tools or parts left in the pit or under the lift. Failure to comply may result in failure of the lift or falling of the vehicle.
16. When use Upper Lift, make sure to lift up to max height to avoid unbalance.

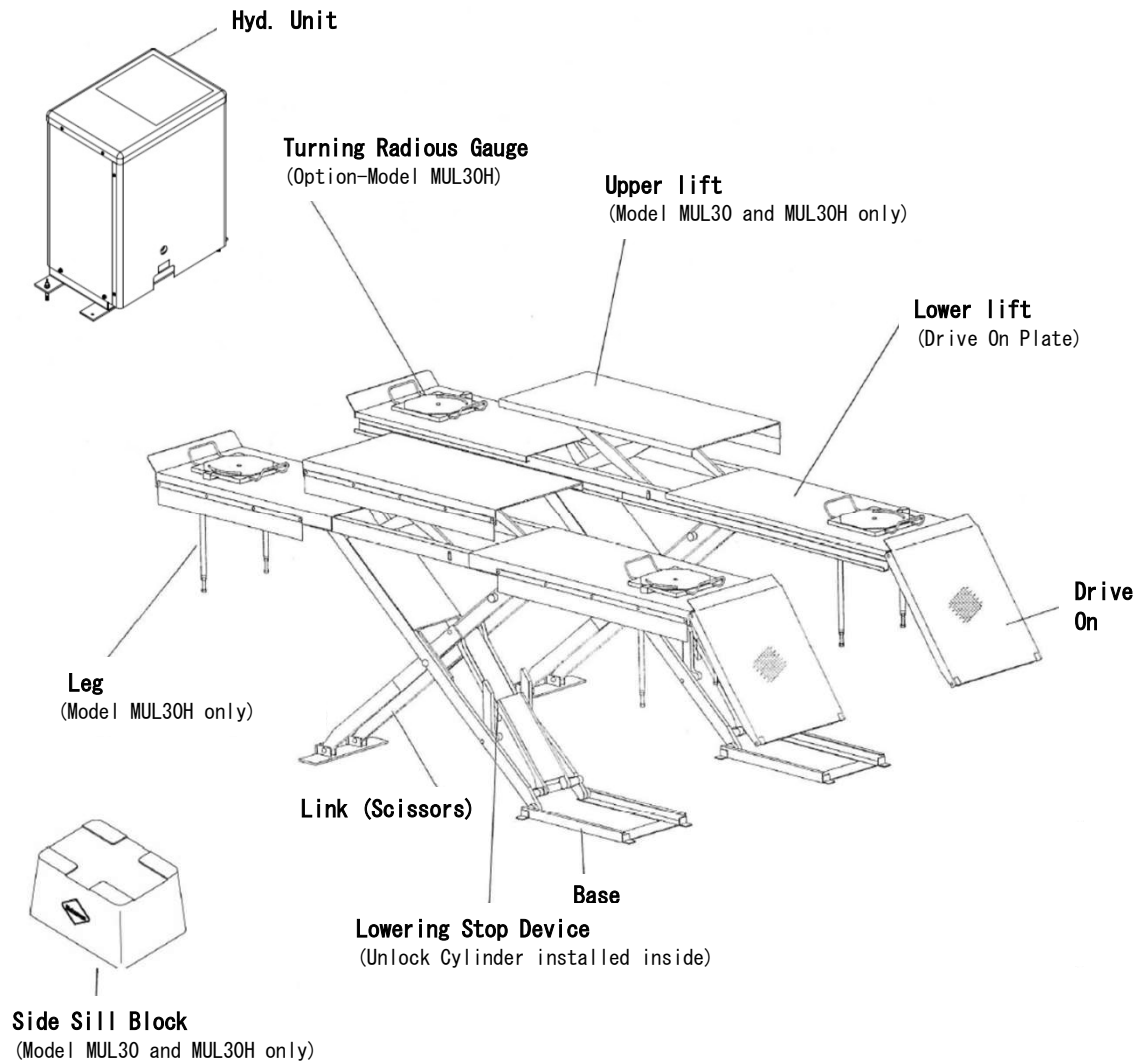
<During Work>

1. Make sure Safety Hooks are engaged before getting under vehicle.
2. When working on a vehicle in raised position, make sure the lift is above the position that Safety Hook is engaged at least with 1st ratchet (Cut out) from the bottom. The lift may drift down (Natural Lowering), causing damage to the vehicle or equipment, tools, or the like nearby.
3. Keep anyone but the operator out from around the lift.
4. **DO NOT** leave a vehicle on the lift for long time.
5. When not in use, the lift must be lowered to the lowest position. Even when not in use, raise and lower the lift all the way through the range at least once a day to maximize the lift life
6. When lowering the lift of Alignment Model (MUL30H), make sure to set all 8 legs are folded or set(fixed) firmly. If the legs are not set firmly, or floor conditions are not flat, the legs might get out of place, and dangerous.
7. After vehicle servicing work, lower the lift to bottom and turn off the power.

<Others>

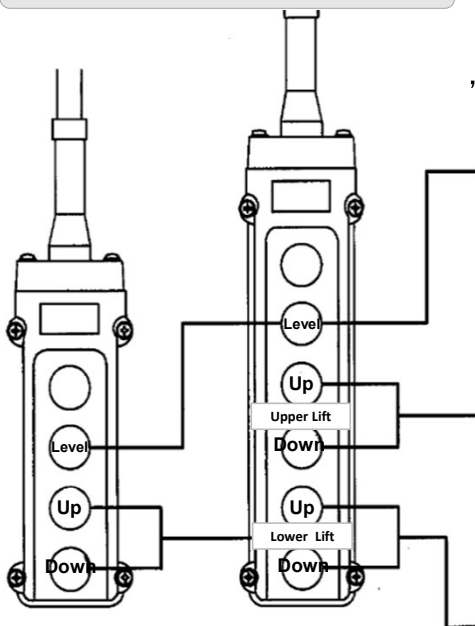
1. **DO NOT** modify the lift without permission from the manufacturer. Failure to comply may result in insufficient performance and lead to serious accident.
2. When an abnormality is detected during use or inspection, stop the use of the lift immediately and repair. **DO NOT** use lift until the repair is completed.
3. This lift is not weatherproof and is not to be used outdoors or for vehicle washing.
4. Do not supply air with air pressure exceeding 1.0 MPa to the filter regulator. Or it may damage the filter regulator.
5. The filter regulator must be set to 0.5 Mpa. If it is set to over 0.5 Mpa, it may damage the Selex Valve.

4. Name and Functions of the components



5. Functions and Operations

Remote Control Switch



"Level" Switch

This switch adjust the height of right side and left side drive on plate of Lower Lift.

By pushing "Level" and "UP" or Down" at same time, left side Lower Lift (Drive On Plate) rise (or lower). Adjust the height of both sides by checking visually.

"Up" and "Down" Switch (for Upper Lift)

By pushing "Up" button, Upper Lift rise, and stop rising when releasing button.

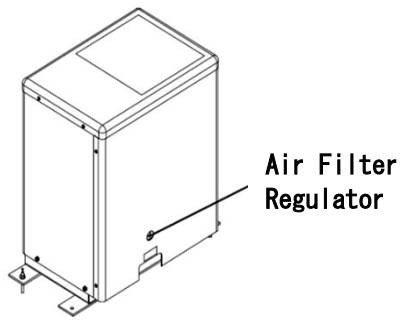
By pushing "Down" button, Upper Lift lower, and stop lowering when releasing button.

"Up" and "Down" Switch (for Lower Lift)

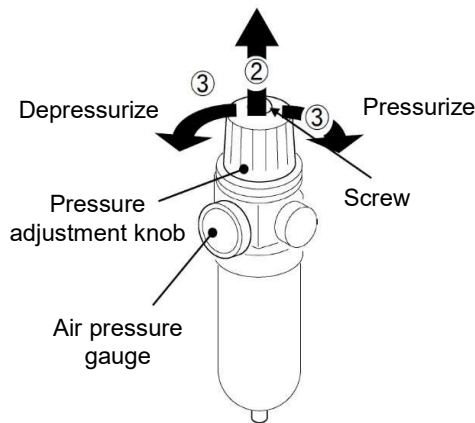
By pushing "Up" button, Lower Lift rise, and stop rising when releasing button.

By pushing "Down" button, Lower Lift lower, and stop lowering when releasing button.

Air Filter Regulator



Hydraulic Unit

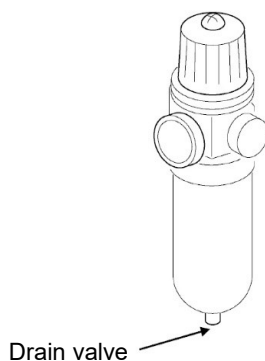


■ How to reduce Air Pressure (Depressurizing)

- ① Verify that the air pressure supplied to the Air Filter Regulator is more than 0.5 Mpa
- ② Loosen the screw on top of the Air Filter Regulator.
- ③ Look at and check the air pressure gauge while turning the pressure adjustment knob to set the air pressure to 0.5 Mpa.
- ④ Tighten the screw on the top of Air Filter Regulator.

⚠ Caution

- * The appropriate value of the pressure of air (primary side pressure) supplied to the filter regulator is between 0.5 and 1.0 MPa. The filter regulator may be damaged if the pressure is greater than 1.0 MPa.
- * Always make sure that the air pressure gauge is pointing 0.5 MPa before operating lift. The lift may malfunction if the pressure is under 0.5 MPa. Furthermore, the Selex valve may be damaged if the pressure is over 0.5 MPa. Always set the pressure to 0.5 MPa.

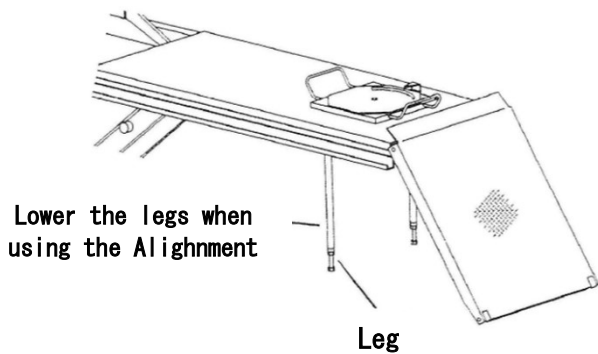


■ How to drain water from air

- ① Push up the drain valve at the bottom.
Water sprays out with air.

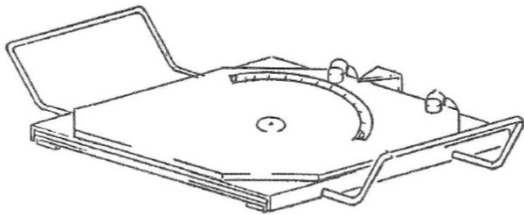
Drain water must be drained from the air filter regulator every day. Accumulation of water can cause malfunction.

Legs - Model MUL30H Only



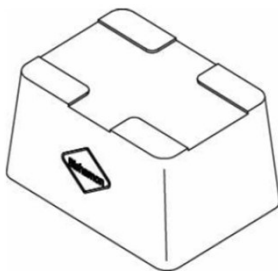
Use legs to stabilize the lift for accurate levelling when using the lift for alignment work. When using lift for alignment work, lower the legs by hands.

Turning Radius Gauge (Option) - Model MUL30H Only



Turning Radius Gauge is used for measuring the alignment.

Side Sill Block - Model MUL30, MUL30H Only

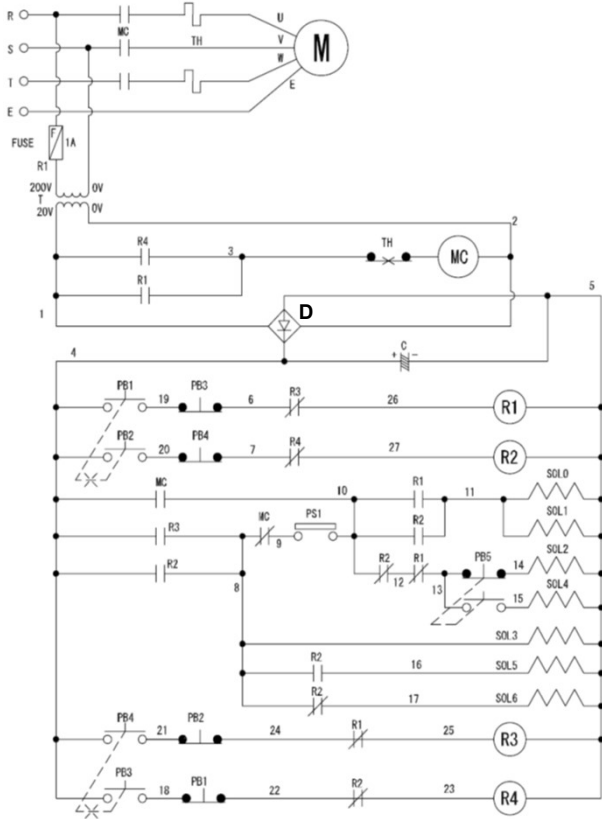


Side Sill Block supporter is used for protecting sill of vehicle. When using Upper Lift for lifting passenger vehicle, put on the top plate of Upper Lift to fit the lifting point of the vehicle.

6. Circuit

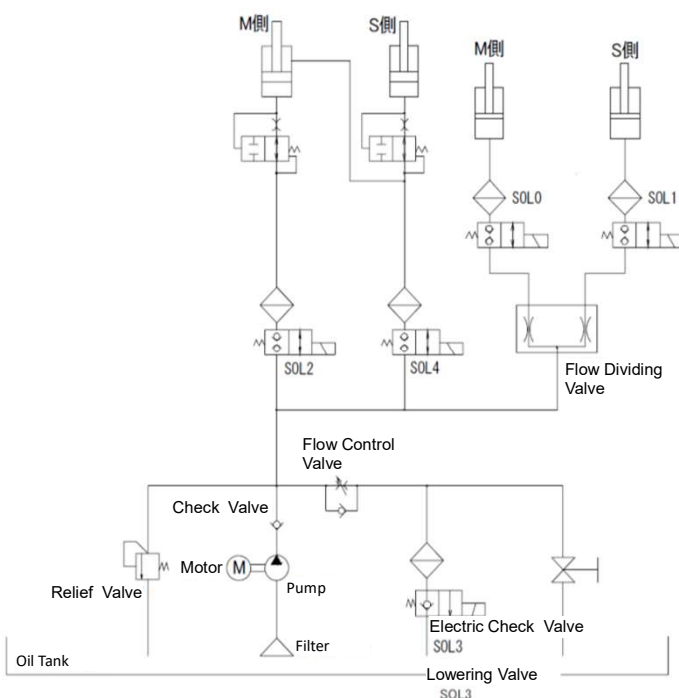
6-1 MUL30、MUL30H

Electric Circuit

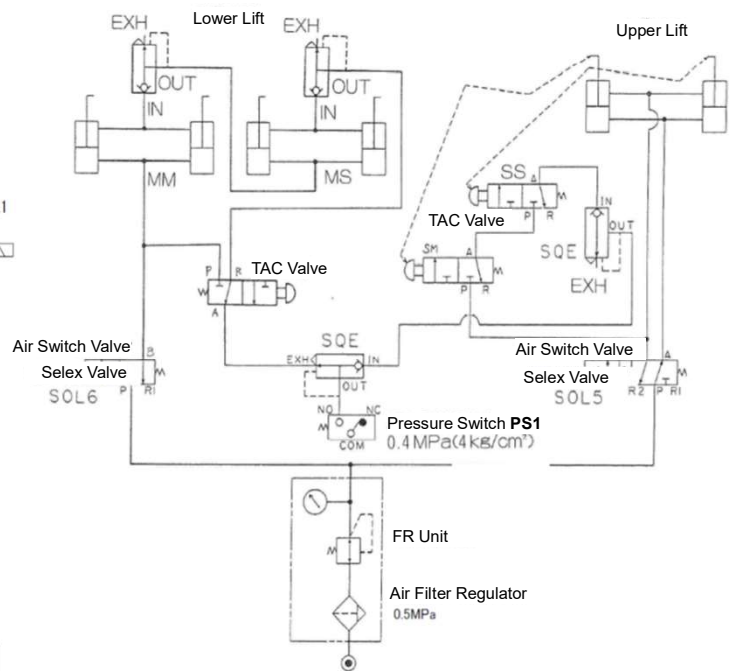


MC	Magnet Contactor
M	Motor
PB1	Lifting Push Button for Upper Lift
PB2	Lowering Push Button for Upper Lift
PB3	Lifting Push Button for Lower Lift
PB4	Lowering Push Button for Lower Lift
PB5	Push Buton for Rectification
SOL0	SR Shut Off Valve
SOL1	SL Shut Off Valve
SOL2	MM Shut Off Valve
SOL3	Lowering Valve
SOL4	MS Shut Off Valve
SOL5	Upper Lift Selex Valve
SOL6	Lower Lift Selex Valve
PS1	Pressure Switch for Lowering Stop Sensing
R1	Upper Lift Lifting Relay
R2	Upper Lift Lowering Relay
R3	Lower Lift Lifting Relay
R4	Lower Lift Lowering Relay
T	Transformer
D	Rectifying Bridge
C	Electrolysis Condensor

Hydraulic Circuit

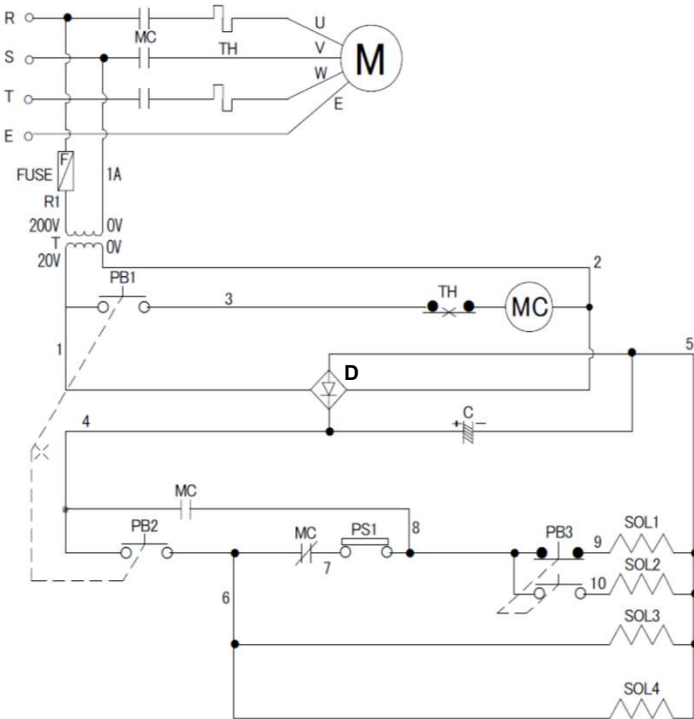


Air Circuit



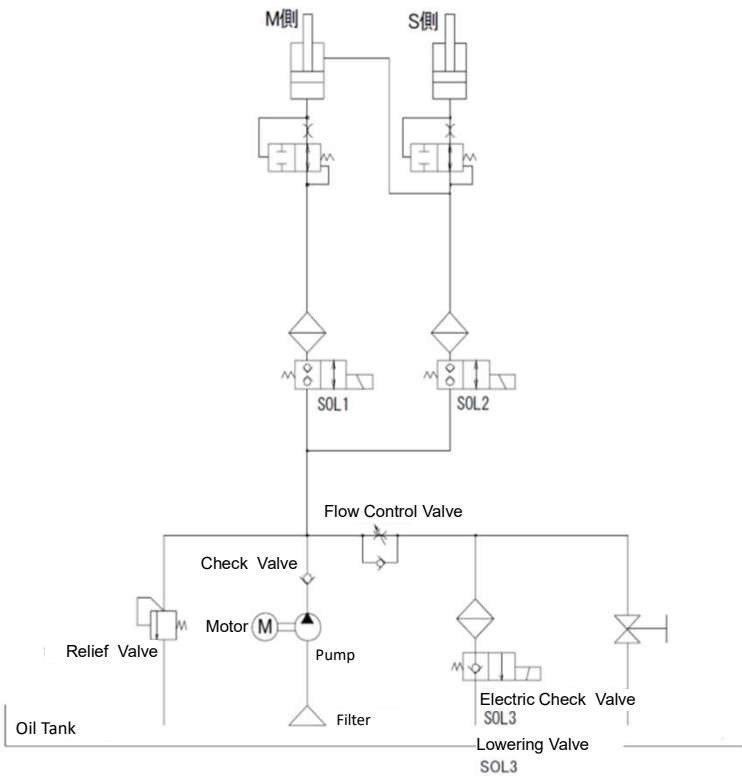
6-2 MUL30E

Electric Circuit

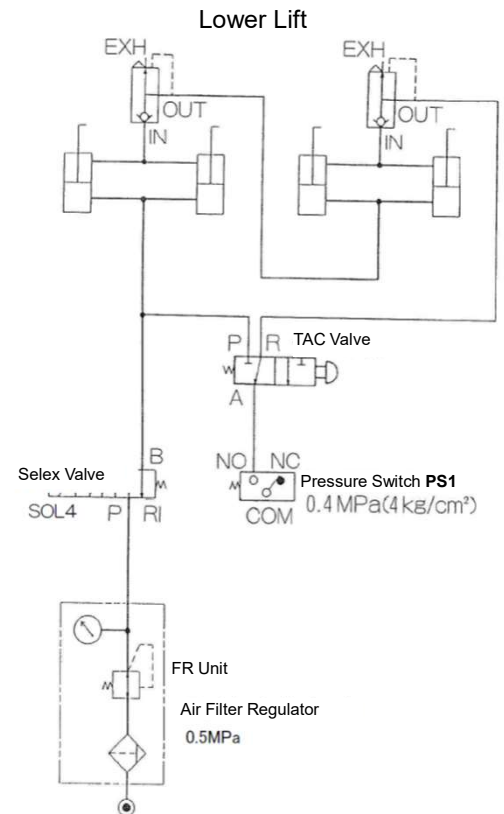


MC	Magnet Contactor
M	Motor
PB1	Lifting Push Button for Upper Lift
PB2	Lowering Push Button for Upper Lift
PB3	Lifting Push Button for Lower Lift
SOL1	SL Shut Off Valve
SOL2	MM Shut Off Valve
SOL3	Lowering Valve
SOL4	MS Shut Off Valve
PS1	Pressure Switch for Lowering Stop Sensing
T	Transformer
D	Rectifying Bridge
C	Electrolysis Condenser

Hydraulic Circuit



Air Circuit



7. Operating Principle

Mucross Lift is operated by Electro Hydraulic.

Synchronizing system of the lift

- Upper Side Lift – through hydraulic valve
- Lower Side Lift – direct connection of both side cylinders

■ Lifting

When pushing “Up” button, motor runs and gear pump feed the oil to cylinder, and lift goes up. When releasing the button, oil flow stops at check valve and lift stops.

■ Lowering

When pushing “Down” button, Lowering Stop Hook would be released first, then Lowering Valve opens and lift goes down. When releasing the button, Lowering Stop Hook engage and Lowering Valve close and lift stops.

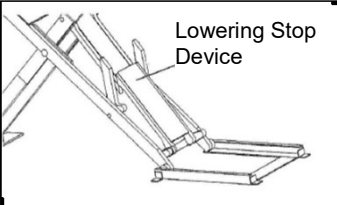
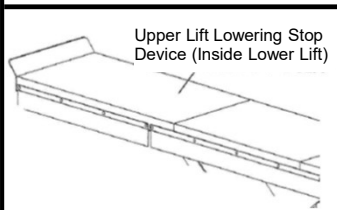
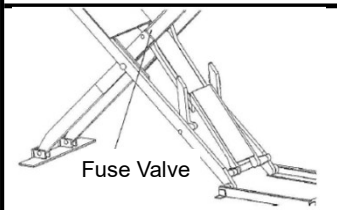
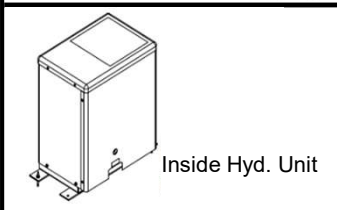
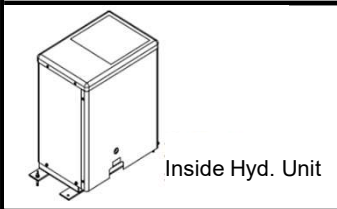
■ Lift Switching (MUL30, MUL30H)

Upper Lift and Lower Lift is to be switched by operating electric valve.

Caution

Because the lift is raised through hydraulic cylinder, lift is naturally to be lowering slightly. Therefore the lift height can not be kept at same height for long time which should be noted.

8. Safety Device

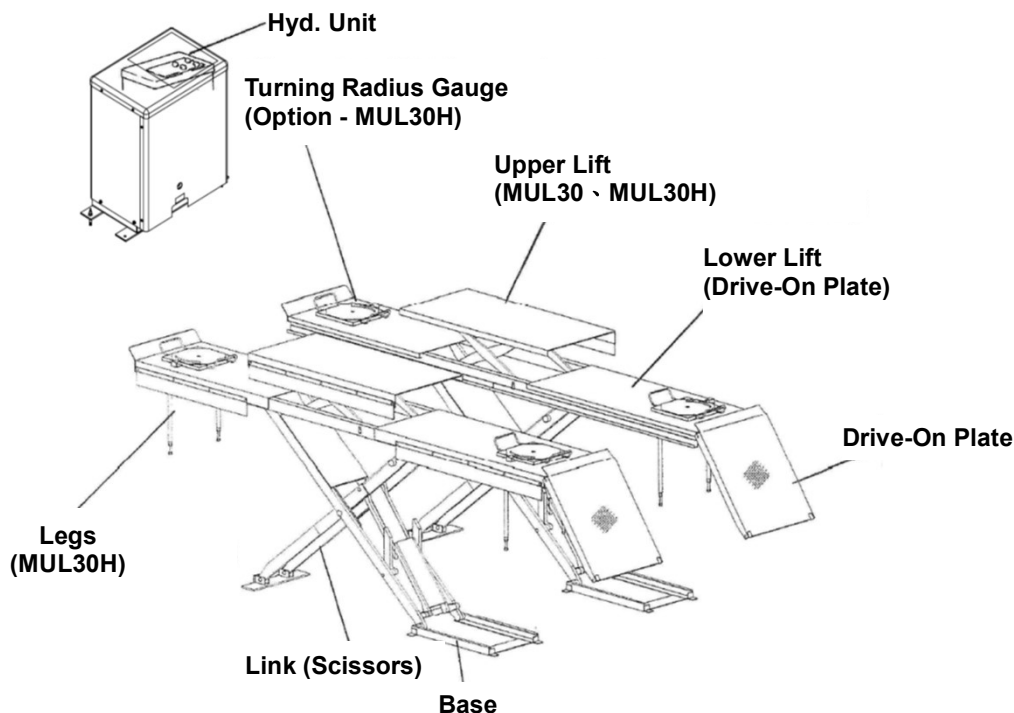
 <p>Lowering Stop Device</p>	<p>Lowering Stop Device</p>	<p>It is installed at each cylinder of Lower Lift to prevent lift from lowering in case of oil leaking and breakage of hydraulic hose etc. However, be noted that there is no safety hook below approx. 600mm height from floor.</p>
 <p>Upper Lift Lowering Stop Device (Inside Lower Lift)</p>	<p>Upper Lift Lowering Stop Device (Model MUL30, MUL30H)</p>	<p>It is installed at each cylinder of Lower Lift to prevent lift from lowering in case of oil leaking and breakage of hydraulic hose etc. But this device works only when the Upper Lift was lifted to top and is located at top position</p>
 <p>Fuse Valve</p>	<p>Fuse Valve (Shut Off Valve for (Lower Lift only))</p>	<p>It is installed at the piping closest to each cylinder. It would shut off oil flow from cylinder in case of sudden flow of oil from cylinder due to breakage of hydraulic circuit etc.</p>
 <p>Inside Hyd. Unit</p>	<p>Relief Valve</p>	<p>It would prevent lift from break in case of below</p> <ol style="list-style-type: none"> Lifting excessing rated lift capacity Lift is reaching the top Excessive high pressure in hydraulic line <p>It is installed inside Gear Pump</p>
 <p>Inside Hyd. Unit</p>	<p>Thermal Relay</p>	<p>It would sense the excessive electric current, and shut off the electric circuit and protect electric components. It is installed at magnetic contactor.</p>

9. Pre-Operation Check

Make sure to perform the Pre-Operation Checks before operating lift everyday
Perform the Pre-Operation Checks without load.

Caution

If any possible abnormality is detected, prohibit the use of the lift until abnormality is fully repaired. Then contact your lift supplier immediately. If the lift is used with abnormality left unsolved, damage to the lift or serious accident may occur.



Point to be Checked	Check Items	Check Method
Lift Structure	Any damage, strain or distortion ?	Visual
Lift	Does lift rise and lower smoothly without noise ?	Visual and hearing
Hydraulic Unit	Does Pressure Gauge of Air Filter Regulator show 0.5 Mpa ?	Visual and Adjust
	Is water drained from Air Filter Regulator ?	Drain by Drain Valve
	Any leak from Hyd. Unit ?	Visual
	Any noise during lifting and lowering ?	Hearing
Hydraulic Cylinder and Piping	Any leak ?	Visual and touching
	Any damage on Hyd. Hose, air hose and piping ?	Visual and touching
Lowering Stop Device on Lower Lift	Does safety device make "clacking" noise during lifting operation ?	Visual and hearing
	Are both Right and Left side Lowering Stop Hook released without fail in lowering ?	Visual and hearing
Lowering Stop Device on Upper Lift	Does Lowering Stop Hook engage at the top with "clacking" noise ?	Visual and hearing
	Are both Right and Left side Lowering Stop Hook released without fail in lowering ?	Visual and hearing
(Only Model MUL30H)	Can all 8ea. legs be kept horizontal or vertical position ?	Operation
	Any damage on Turning Radius Gauge ?	Visual

10. Operation Instructions

Danger

If the vehicle starts to fall from lift, move away quickly. **DO NOT ATTEMPT TO SUPPORT VEHICLE.**

Warning

- Read and fully understand this operation manual before operating the lift.
- **DO NOT** use lift unless you have been trained in it's operation.
- **DO NOT** attempt to lift heavier loads than rated capacity.
Lift Capacity : Lower Lift - 3,000 kgs., Upper Lift - 2,000 kgs.

Caution

- This lift is designed for motor vehicle servicing. **DO NOT** use for other purpose.
- **DO NOT** use lift in case any safety device does not work.
- If there are other lifts installed at the same site, Pay attention not to operate the control switch of the other lifts.
- When operating lift, pay constant attention to the area around vehicle and the lift. **NEVER** look aside during the operation.
- **DO NOT** operate lift with anything such as tools or parts left in the pit or under the lift. Or it may result in the failure of the lift, or falling of the vehicle.
- When an abnormality is detected during use or inspection, stop the use of the lift immediately and repair. **DO NOT** use lift until the repair is completed.
- This lift is not weatherproof, and is not to be used outdoors or for vehicle washing.
- When use Upper Lift, make sure to lift up to max height to avoid unbalance.

10-1 Preparation before Driving-In Vehicle

Lower the lift (including Upper Lift for Model MUL30 and MUL30H) to the lowest, and remove everything such as tools and parts etc.

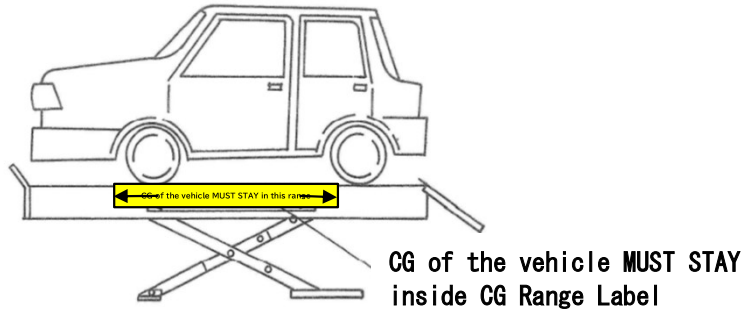
And if the optional Jacking Beams are installed, move both to front side of the lift.

10-2 Vehicle Entry

Caution

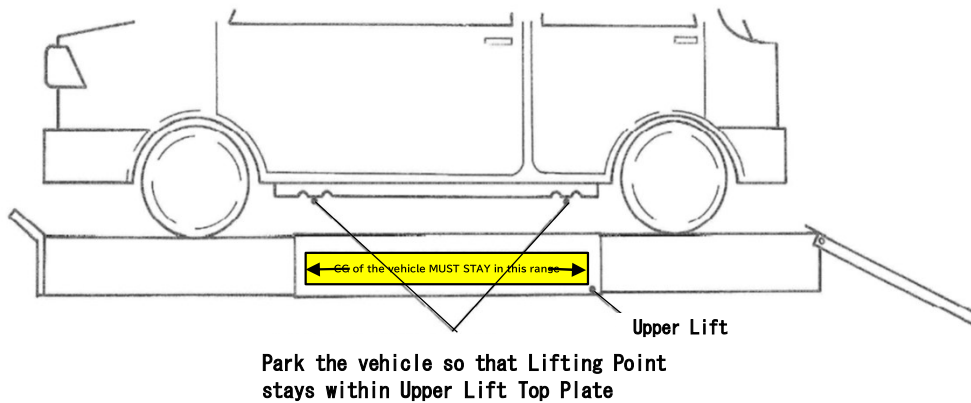
- Drive in vehicle parallel to the Drive-On Plate of the lift and evenly in its width direction.
- Drive in and out vehicle slowly, and **DO NOT** start and stop suddenly.

Drive in vehicle straight and parallel to the lift positioned evenly in width.
Park the vehicle within CG range shown in the CG label, and set the Parking Brake.



■ Parking Location (for Model MUL30、MUL30H)

Park the vehicle within CG Range Label, and also best position so that Upper Lift can contact lifting point with best position.



10-3 Lifting Operation of Lower Lift (Drive-On Plate)

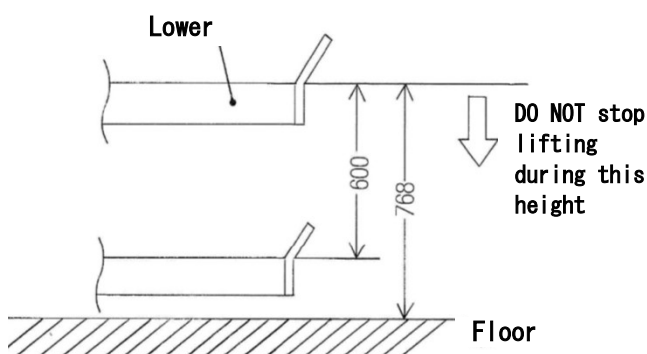
⚠ Warning

- When operating lift, **DO NOT** get under vehicle.
- Pay close attention to the tilting of the vehicle when operating lift.

⚠ Caution

- When operating lift, pay constant attention to the area around vehicle and the lift. **NEVER** look aside during the operation.
- **DO NOT** lift up vehicle with passengers or baggage inside.
- When lift reached the max height, **STOP** lifting immediately.
- The lift height of both sides may become unbalanced during lifting and lowering operations. In such case, follow the instructions of Operation Manual and balance the height of both sides. If not

① Push the "Up" button of Lower Lift. The Lower Lift (Drive-On Plate) would rise. When operating lift, pay close attention to the lift and tilt of the vehicle. If the lift gets tilted, adjust and correct unbalance by following instructions (P19).



② Lift would stop lifting when releasing the "UP" button at any height. **However**, lift must be lifted up over 600mm high from floor as safety device (Lowering Stop) does not work below 600mm.

10-4 Lifting Operation of Upper Lift (Model MUL30、MUL30H only)

⚠ Danger

- When operating lift, **DO NOT** get under vehicle.

⚠ Warning

- When operating lift, pay close attention to the tilting of the vehicle.
- Set the supportors on a flat spot with sufficient strength.

⚠ Caution

- When operating lift, pay constant attention to the area around vehicle and the lift. **NEVER** look aside during the operation.
- **DO NOT** lift up vehicle with passengers or baggage inside.
- Use only genuine Side Sill Block supporter between upper lift top plate and vehicle lifting point when lifting vehicle by Upper Lift.
- When use Upper Lift, make sure to lift up to max height to avoid unbalance.

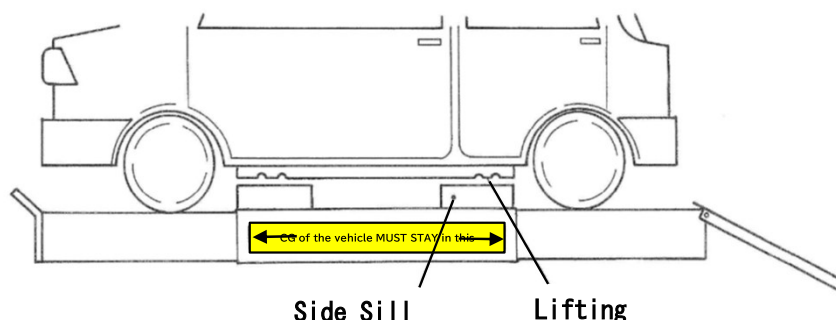
Note :

Upper Lift can be used only for passenger vehicle, and not for truck or USV which requires lifting by vehicle frame as lifting point. Optional Jacking Beam would be recommended and available for lifting up such truck or USV etc.

① (Model MUL30 and MUL30H Only)

Make sure Upper Lift is positioned which would contact the correct Lifting Point of vehicle. If not, lower the Lower Lift to bottom and move the vehicle to adjust location.

② Put Side Sill Block supporter at correct spot on Upper Lift Drive-On Plate so that supportors would contact Lifting Point of the vehicle properly.



③ Push "Up" button switch to lift up Upper Lift.

④ Stop lifting just before Side Sill Block would contact vehicle. Check if Side Sill Block would fit to Lifting Point of the vehicle. If not, adjust the location.

⑤ Push the "Up" button again and make sure to lift up to the max height. Keep pushing "Up" button for 2 seconds even after reached max height. If stop before reaching max height, the lift could tilt.

10-5 Servicing the vehicle

Danger

If the vehicle starts to fall from lift, move away quickly. **DO NOT ATTEMPT TO SUPPORT VEHICLE.**

Warning

- Keep anyone but the operator out from around the lift area.
- Before start servicing vehicle, make sure Safety Hooks are "engaged".
- When not in use, the lift must be lowered to the lowest position.
- **DO NOT** leave a vehicle on the lift for a long time. The lift at lower level without Lowering Stop Hook may lower and could damage the vehicle.
- When lowering the lift of Alignment Model(MUL30H), make sure to set all 8 legs are folded or set(fixed) firmly. If the legs are not set firmly, or floor conditions are not flat, the legs might get out of place, and dangerous.
- If the vehicle tyres are free (neutral), make sure to put the Wheel Stop, or pull the Side Brake.

10-6 Lowering Operation of Upper Lift (Model MUL30 and MUL30H Only)

Danger

- **DO NOT** get under vehicle when operating the lift

Warning

- Pay close attention to the tilting of the vehicle during operation.

Caution

- When operating lift, Pay close attention to the condition of the vehicle. Never look aside during the operation.
- When lowering the lift, pay constant attention to the area around vehicle and lift.

① Do not operate the lift while tools or parts are left inside the pit or on movable parts of the lift unit. Remove all of them if there are any.

② Push "Down" button switch of the Upper Lift to lower the Upper Lift. Do not stop lowering the Upper lift at halfway, and keep pushing "Down" button all the way until reaching lowest position. Keep pushing "Down" button for 2 seconds even after reaching lowest position to avoid tilting of the lift on the way down. If the lift would not lower, raise the lift and then push "Down" button again.

10-7 Lowering Operation of Lower Lift (Drive-On Plate)

! Danger

- DO NOT get under vehicle when operating the lift

! Warning

- DO NOT lower the lift while any stand or transmission jack etc. is in position under vehicle.
- Pay close attention to the tilting of the vehicle during operation.
- Keep feet clear of lift and wheel stop etc. when lowering the lift

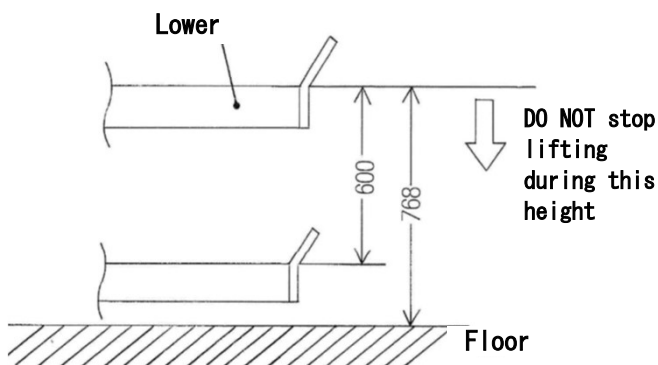
! Caution

- When operating lift, Pay close attention to the condition of the vehicle. Never look aside during the operation.
- When lowering the lift, pay constant attention to the area around vehicle and lift.
- The lift height of both sides may become unbalanced during lifting and lowering operations. In such case, follow the instructions of Operation Manual and balance the height of both sides. If not correcting the unbalance situation, it may result in the fall of the vehicle.

① Do not operate the lift while tools or parts are left inside the pit or on movable parts of the lift unit. Remove all of them if there are any.

② (Model MUL30 and MUL30H Only)

Push "Down" button switch of the Lower Lift to lower the Lower Lift. Pay close attention to the tilting of the vehicle during lowering operation. The lift height of both sides may become unbalanced during lowering operation. In such case, follow the instructions (P19) of Operation Manual and balance the height of both sides. If the lift does not lower, raise the lift and then push "Down" button again.



③ Lift would stop lifting when releasing the "Down" button at any height. However, as there is no safety device below 600mm height from floor, DO NOT stop lowering below 600mm. Make sure to lower the lift to the lowest when exiting vehicle.

④ When lowering the lift with the unbalanced situation that right side lift (from vehicle entry direction) is lower than left side for more than 350mm, left side lift will not lower to bottom. In such case, lift up both sides lift to higher than 350mm, and then rectify the level, and then start to lower again.

10-8 Rectifying the Levelling

⚠ Danger

- DO NOT get under vehicle when operating the lift

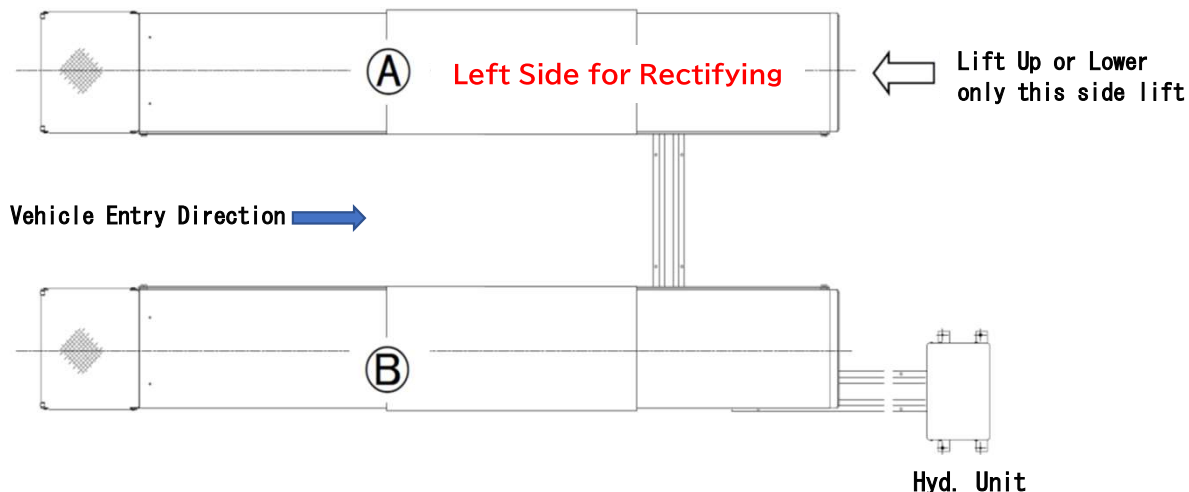
⚠ Warning

- Pay close attention to the tilting of the vehicle during operation of lifting and lowering.

⚠ Caution

- When operating lift, Pay close attention to the condition of the vehicle. Never look aside during the operation.

The cylinders (both sides) of Lower Lift are connected direct, and level of both sides can be unbalanced during operation. When lift became unbalanced during operation, follow the following procedure and adjust and rectify the levelling. In the rectifying procedure, use only left side lift (from vehicle entering direction) to lift up, or lower down to adjust levelling.



In case ① side is higher (lower) than ② side lift

① (Model MUL30 and MUL30H Only)

Keep pushing "Level" switch button, and push "Down" (or "Up") button also. Then only ① side lift would lower (or goes up).

② When both sides (① and ②) becomes levelled visually, stop lowering (or raising)

Note :

There are no auto levelling feature with this lift. Make sure to check level visually and adjust the level.

10-9 Alignment Measuring (Model MUL30H Only)

- ① This lift can measure the alignment of the below range of vehicle.
Wheel Base : 2,000 ~ 3,100 mm
Tread : 1,200 ~ 1,550 mm
- ② Drive in the vehicle on the Lower Lift (Drive-On Plate) and lift up higher than 800mm from floor
- ③ Pull all the legs down (8ea.) to vertical position until legs click and get into fixed position.
- ④ Make sure the floor is clear of any tools, or obstacles that may obstruct the legs standing on the floor.
- ⑤ Push "Down" switch button to lower the lift, and keep pushing button 3 seconds after lift was lowered to lowest position.
- ⑥ Push "Level" switch button and "Down" button together for 3 seconds.
- ⑦ Lift up the vehicle by Upper Lift, or by using Jacking Beam, and then place Turning Radius Gauge under vehicle tires.
- ⑧ Lower the vehicle down on the Turning Radius Gauge by Upper Lift, or by Jacking Beam.
- ⑨ Perform Alignment servicing.
- ⑩ (After Alingment service is over), remove the Turning Radius Gauge by lifting vehicle with Upper Lift or Jacking Beam.
- ⑪ Push "Up" button of Lower lift to lift up Lower lift. If unbalancing occurs, rectify the level (Refer to P19).
- ⑫ Push all 8ea. Legs horizontally back into original position until they click.
- ⑬ Push "Down" switch button of Lower Lift to lower the Lower Lift to bottom.

11. Clean Up after servicing vehicle

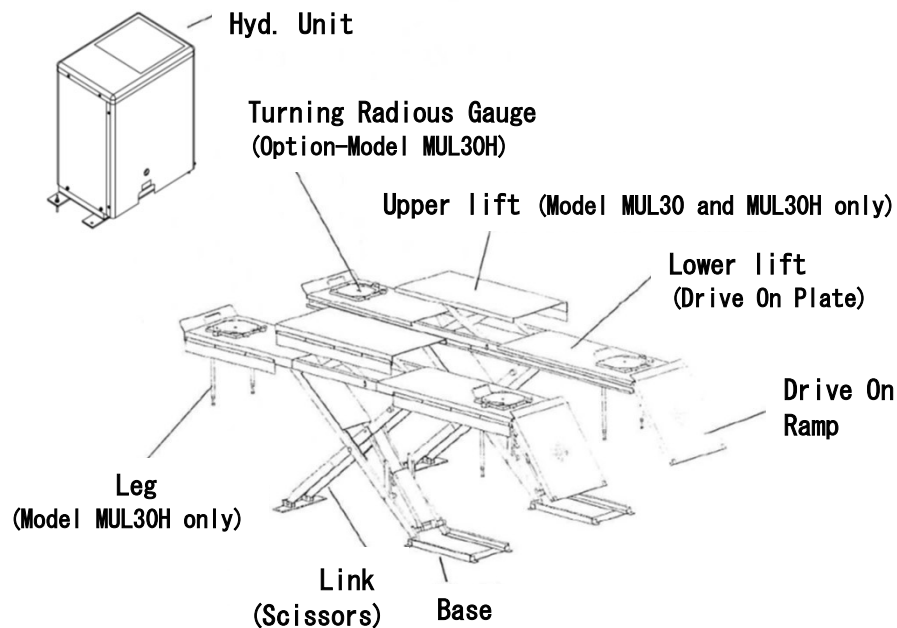
After servicing vehicle, remove any oil or grease left in the lift area. If any abnormality are found, contact the lift supplier. Lower the lift down to floor, and turn off the power.

12. Regular Inspection and Maintenance

Be sure to perform the regular inspection at least once a month in addition to the pre-operation check which is performed everyday in order to ensure that lift can be used safely. Perform the inspection without lifting vehicle.

! Caution

In the event when even slightly abnormal condition arises during routine use of the lift, Suspend the use of the lift immediately and make sure it is repaired properly and verify safety before using the lift. Request the lift supplier where lift was purchased for repairs on abnormality. Make sure to use Bishamon genuine parts for repair.



Inspection Point	Inspection Items
Anchor Bolts, Bolts and Nuts	Loosening
Lubrication Points	Lubrication
Lowering Stop Device (Hook)	Operating conditions of Lowering Stop Hook
Electric Circuit	Operating conditions and breaking of wire
Hyd. Circuit	Loosening of piping, breakage and leak
Air Circuit	Operating conditions, air leak
Bearing, shaft	Wearing

In addition to above inspection, perform Pre-Operation Check.

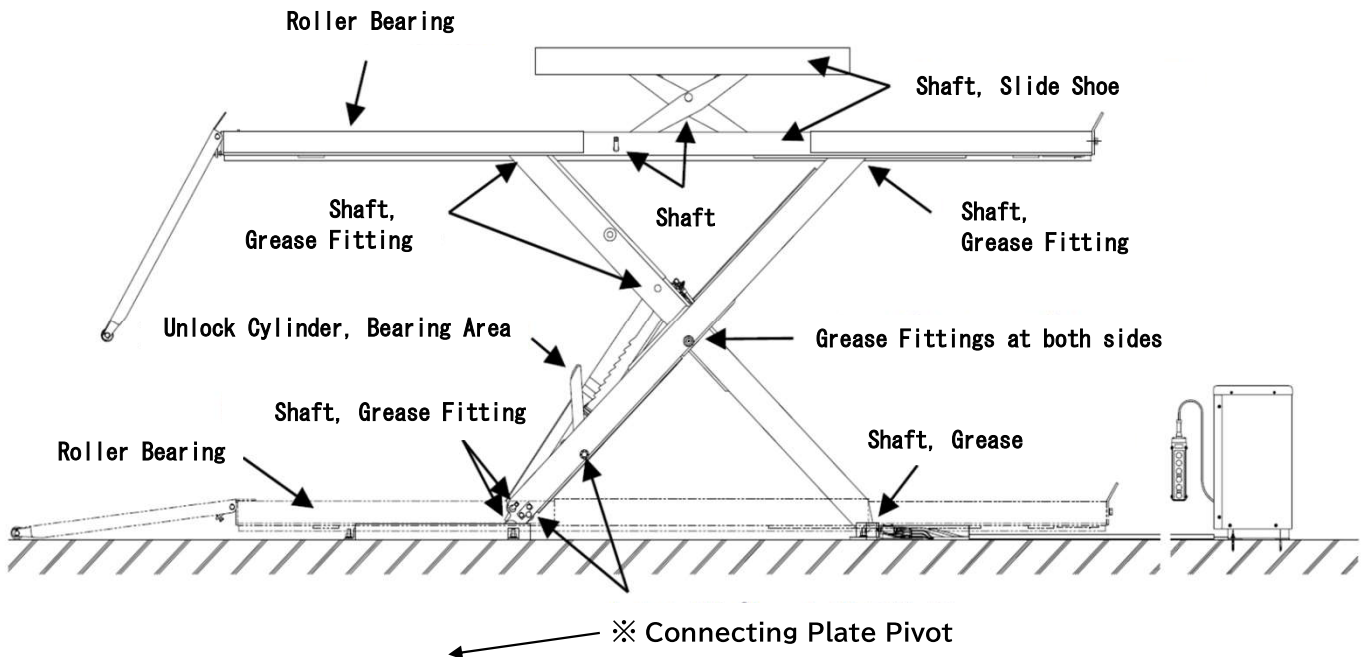
! Caution

Wear the safety protector when proceeding inspection depending on the necessity of inspection items.

Notes for Safe Use

Have a qualified service personnel perform a periodical inspection once a year in addition to the regular inspection of the above. Request lift supplier where the lift was purchased for periodical inspection performed.

Lubrication Points



※ Connecting Plate Pivot :

Use superior permeability lubricant such as spray grease every month so that lubricants penetrate into shaft area.

13. Parts & Components requiring periodic replacement

The below parts and components require periodic replacement to secure the safety of the lift and avoid trouble.

Note : Time to replace (Replacement Period) does not mean the warranty period.

Depending on the usage conditions, environments etc., some parts would require earlier replacement, or unlisted parts in below may require replacement.

Ask lift supplier for the replacement of the parts other than consumable parts.

Replacing Period	Parts
Every Year	• Rubber parts of supporter
Each time when disassembling	• Parts related to waterproof
Every 3 years	• Oil (1 year after installation and then every 3 year) • Push Button Switch and cable • Pneumatic components
Every 3 years, or when Legs Bolts broke	• Leg Bolt at end of legs
Every 5 years	• Cylinder seals • Lowering Stop Device components • Some parts of Electric components • Hydraulic hoses

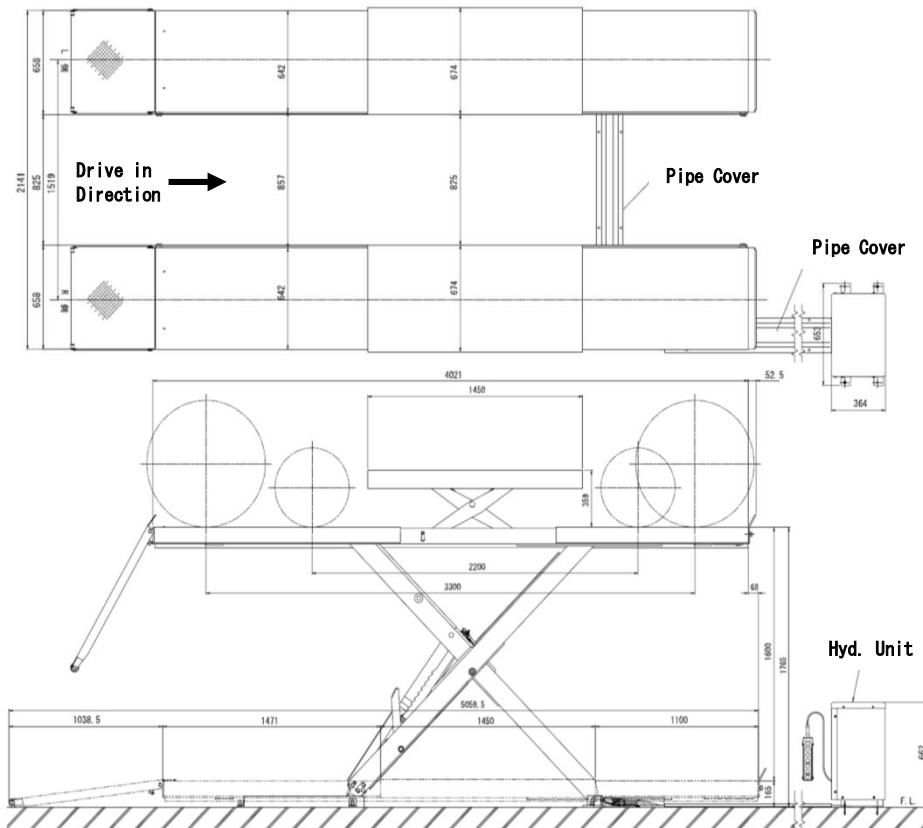
14. Trouble Shooting

If any abnormality occurs, carefully read this manual and make the following checks and actions. If abnormality can not be eliminated, contact your lift supplier for advice.

Symptom	Possible Cause	Action
Lift does not rise	· Thermal relay of magnet contactor is running	· Investigate the cause and push the reset button
	· Contacting point of magnet contactor is burnt	· Replace magnet contactor
	· Cable connection fault	· Connect the cable
	· Disconnected cable of motor or burnt motor	· Replace motor
	· Bad contact of Push-button switch	· Replace Push-button switch
	· Pressure switch is working due to overload	· Get the vehicle off the lift
	· Motor is running reverse direction	· Rewire 2 wires out of 3 wires
	· Hydraulic oil is not full	· Fill the oil
	· Gear pump does not vacuum oil	· Replace gear pump
Lift does not lower	· Roller at bottom of link is stuck with foreign objects	· Remove foreign objects
	· Lowering Stop hook is engaged with safety rack	· Raise the lift once and then lower
	· Filter inside Lowering Valve is clogged	· Replace filter or clean up
	· Air pressure supplied is below 0.5 MPa	· Adjust the Air Filter Regulator or adjust the supplied air pressure
The lift goes up but gradually lowers	· Oil leak from Lowering Valve	· Replace Lowering Valve
	· Defective seals of cylinder	· Replace seals
	· Defective check valve	· Clean up, or replace check valve
	· Oil leak from piping	· Tightening
	· Loose tightening of manual lowering valve	· Tightening
Rising speed is slow	· Oil filter is clogged	· Clean up, or replace oil filter
	· Filter of Valve Manifold is clogged	· Clean up, or replace filter
	· Air is in the oil	· Fill the oil, or replace oil
	· Air get in from suction side	· Tightening the piping
	· Wear of Cylinder seals	· Replace seals
	· Hyd. Oil get heated (over 45°C)	· Replace with recommended oil
Abnormal Noise	· Lack of lubrication at bearing of link	· Lubricate
	· Wear of rollers at link	· Replace rollers
	· lack of hyd. Oil	· Fill the oil
Lift does not rise and lower	· Fuse is blown	· Replace fuse
	· No primary power supplied	· Supply primary power

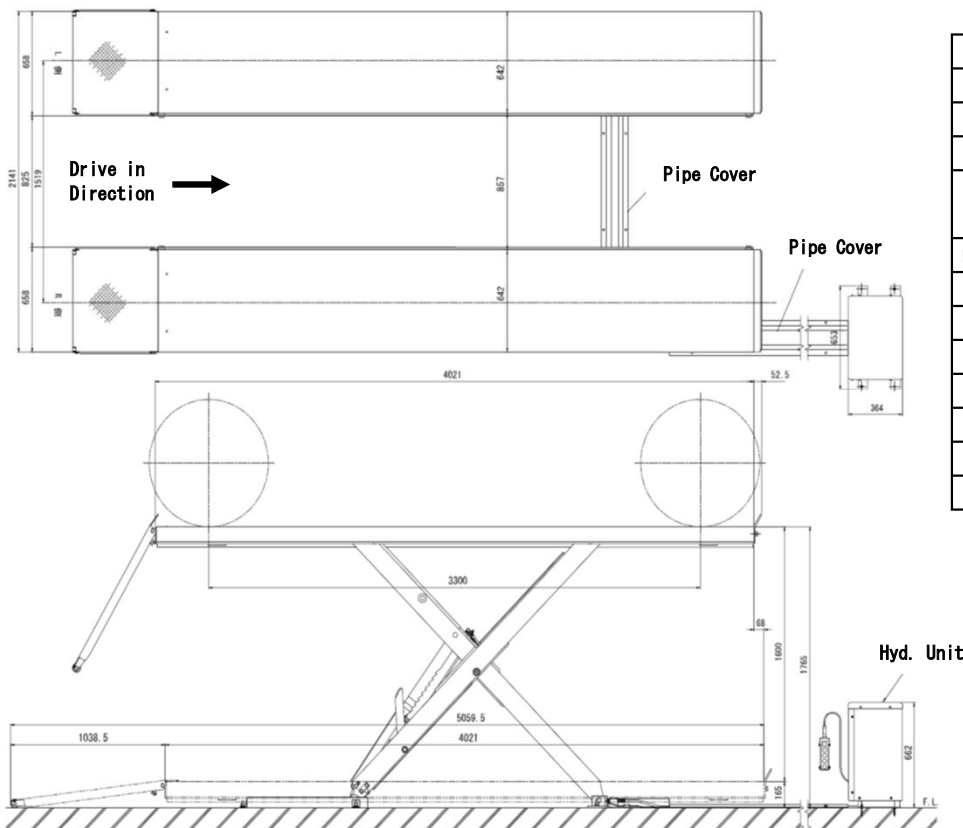
15. Specifications

MUL30



Specification	
Model No.	MUL30
Capacity	Lower Lift 3000 kgs.
	Upper Lift 2000 kgs.
Vertical Travel	Lower Lift 1600mm
	Upper Lift 350mm
Rising Speed	Lower Lift Approx. 72 Seconds (50Hz)
	Upper Lift Approx. 13 Seconds (50Hz) Approx. 11 Seconds (60Hz)
Lowering Speed	Lower Lift Approx. 25 Sec. (Loaded)
	Upper Lift Approx. 10 Sec. (Loaded)
Voltage	3PH/
Motor	1.5KW/4P/10 Minutes Rating
Operation	Electric Hydraulic
Control	Push Button Switch (24V Control)
Oil Volume	18L (ISO VG32)
Air Pressure	0.5~1.0 MPa
Machine Weight	1560 kgs

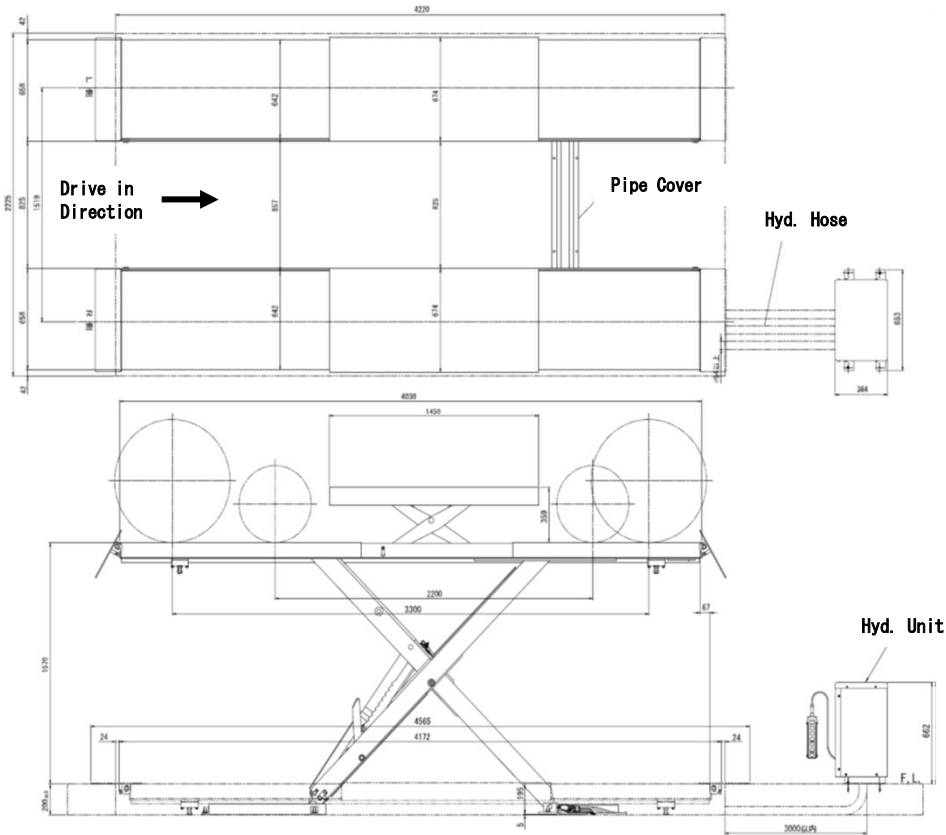
MUL30E



Specification	
Model No.	MUL30E
Capacity	3000 kgs.
Vertical Travel	1600mm
Rising Speed	Approx. 72 Seconds (50Hz)
	Approx. 60 Seconds (60Hz)
Lowering Speed	Approx. 25 Sec. (3000 kgs. Loaded)
Voltage	3PH/
Motor	1.5KW/4P/10 Minutes Rating
Operation	Electric Hydraulic
Control	Push Button Switch (24V Control)
Oil Volume	18L (ISO VG32)
Air Pressure	0.5~1.0 MPa
Machine Weight	1240 kgs

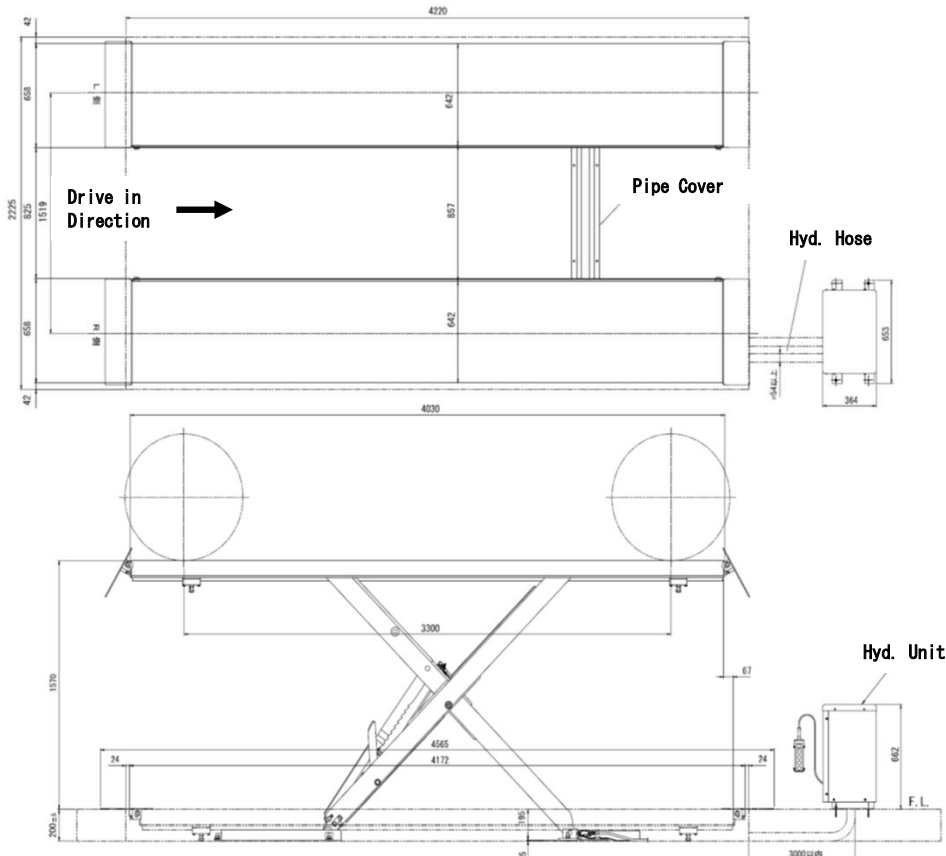
【 Pit model 】

MUL30P



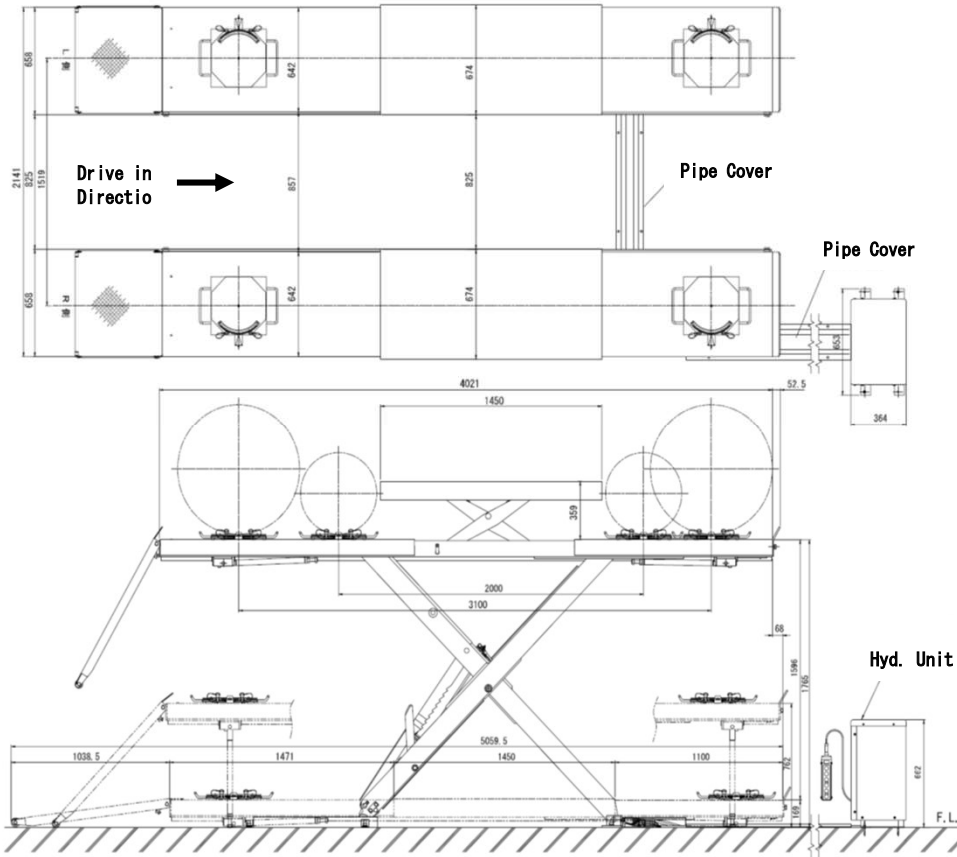
Specification		
Model No.	MUL30P	
Capacity	Lower Lift	3000 kgs.
	Upper Lift	2000 kgs.
Vertical Travel	Lower Lift	1570mm
	Upper Lift	350mm
Rising Speed	Lower Lift	Approx. 72 Seconds (50Hz) Approx. 60 Seconds (60Hz)
	Upper Lift	Approx. 13 Seconds (50Hz) Approx. 11 Seconds (60Hz)
Lowering Speed	Lower Lift	Approx. 25 Sec. (Loaded)
	Upper Lift	Approx. 10 Sec. (Loaded)
Voltage	3PH/	
Motor	1.5KW/4P/10 Minutes Rating	
Operation	Electric Hydraulic	
Control	Push Button Switch (24V Control)	
Oil Volume	18L (ISO VG32)	
Air Pressure	0.5~1.0 MPa	
Machine Weight	1560 kgs	

MUL30EP



Specification		
Model No.	MUL30EP	
Capacity	3000 kgs.	
Vertical Travel	1570mm	
Rising Speed	Approx. 72 Seconds (50Hz) Approx. 60 Seconds (60Hz)	
	Approx. 25 Sec. (3000 kgs. Loaded)	
Lowering Speed	Approx. 25 Sec. (3000 kgs. Loaded)	
Voltage	3PH/	
Motor	1.5KW/4P/10 Minutes Rating	
Operation	Electric Hydraulic	
Control	Push Button Switch (24V Control)	
Oil Volume	18L (ISO VG32)	
Air Pressure	0.5~1.0 MPa	
Machine Weight	1240 kgs	

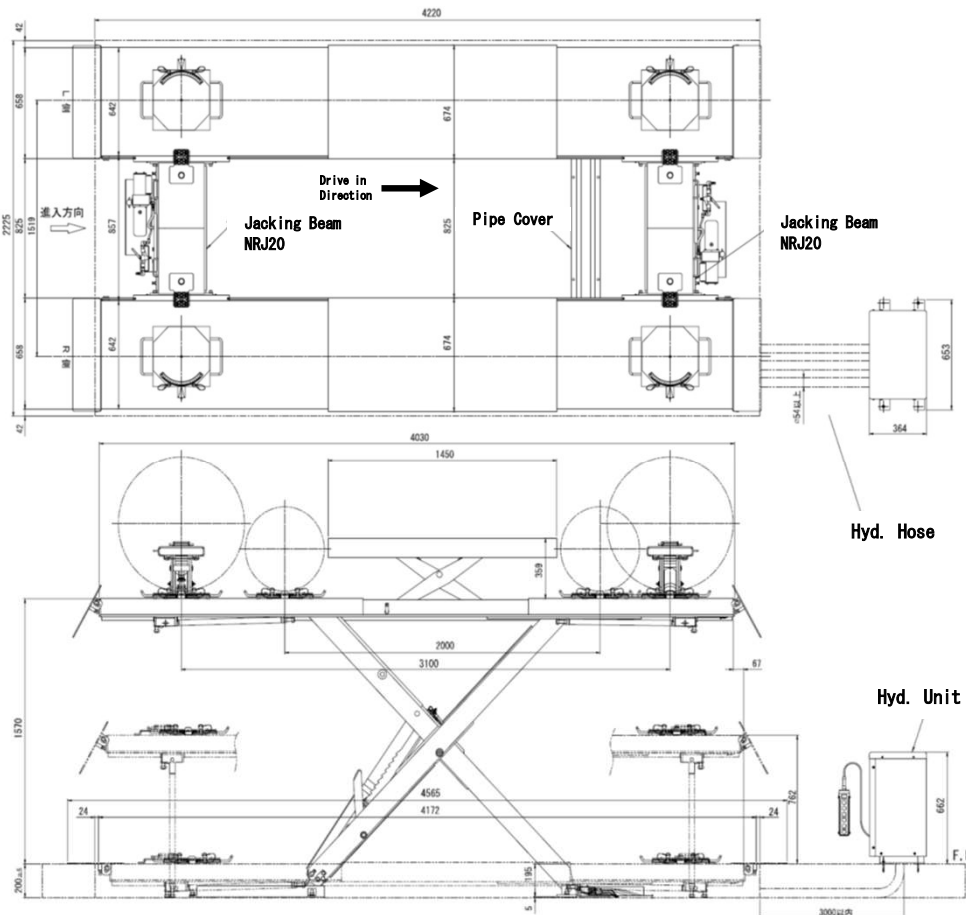
MUL30H



Specification		
Model No.	MUL30H	
Capacity	Lower Lift	3000 kgs.
	Upper Lift	2000 kgs.
Vertical Travel	Lower Lift	1596mm
	Upper Lift	350mm
Rising Speed	Lower Lift	Approx. 72 Seconds (50Hz) Approx. 60 Seconds (60Hz)
	Upper Lift	Approx. 13 Seconds (50Hz) Approx. 11 Seconds (60Hz)
Lowering Speed	Lower Lift	Approx. 25 Sec. (Loaded)
	Upper Lift	Approx. 10 Sec. (Loaded)
Voltage	3PH/	
Motor	1.5KW/4P/10 Minutes Rating	
Operation	Electric Hydraulic	
Control	Push Button Switch (24V Control)	
Oil Volume	18L (ISO VG32)	
Air Pressure	0.5~1.0 MPa	
Machine Weight	1700 kgs	

【 Pit model 】

MUL30HP



Specification		
Model No.	MUL30HP	
Capacity	Lower Lift	3000 kgs.
	Upper Lift	2000 kgs.
Vertical Travel	Lower Lift	1570mm
	Upper Lift	350mm
Rising Speed	Lower Lift	Approx. 72 Seconds (50Hz) Approx. 60 Seconds (60Hz)
	Upper Lift	Approx. 13 Seconds (50Hz) Approx. 11 Seconds (60Hz)
Lowering Speed	Lower Lift	Approx. 25 Sec. (Loaded)
	Upper Lift	Approx. 10 Sec. (Loaded)
Voltage	3PH/	
Motor	1.5KW/4P/10 Minutes Rating	
Operation	Electric Hydraulic	
Control	Push Button Switch (24V Control)	
Oil Volume	18L (ISO VG32)	
Air Pressure	0.5~1.0 MPa	
Machine Weight	1700 kgs	

16. Installation and Relocation

Contact your lift supplier for the installation and relocation of the lift.
Have your lift inspected by your lift supplier before relocation.

17. Disposal

When disposing of this lift, break it down into scrap and separate the scrap into steel, non-ferrous metals, plastics, hydraulic oil, etc. Dispose of these materials as industrial waste. Hydraulic oil, in particular, must be disposed of as per applicable statutory and regulatory requirements. Ensure proper disposal in accordance with applicable laws and regulations.

18. Warranty

We warrant the lift manufactured by Sugiyasu Corporation to be free from defects in workmanship and material for **1 year**. Our obligation under this warranty is limited to option, of any parts or material which, within this warranty period, are found to our satisfaction to be defective.

The belows are not to be covered by the warranty.

- 1 The damage or trouble caused by false operation, negligence of maintenance and storage required.
- 2 The damage or trouble caused by the modification that affects the original designed functions.
- 3 Any consumable parts that need to be replaced.
- 4 The damage or trouble caused by natural disaster such as fire, earthquake, flood etc.
- 5 The damage or trouble caused by not using the original manufacturer's genuine parts.
- 6 The required information such as serial No. etc. would not be provided.
- 7 The damage or trouble caused by improper installation.

- * Any consumable parts such as rubber parts etc. are not covered under this warranty.
- * As this lift is not weatherproof, trouble caused by corrosion, rust, short circuit from water are not covered under warranty.

Caution

As this lift is not weatherproof, or washing model, the defects caused by rust, corrosion, short circuit from water would not be covered under warranty.

How To Claim

Contact your lift supplier

19. After Service

Something is wrong	Check in accordance with this manual
Something is still wrong	Contact your lift supplier
Repair under Warranty period	will be repaired in accordance with Warranty rules
Repair after Warranty period	Contact your lift supplier
Availability of spare parts	The spare parts are available for 8 years after discontinuing manufacturing

Contact your lift supplier for any information regarding after service. When contacting your lift supplier, provide following information.

- **Model No.**
- **Serial No.**
- **Purchase Date**
- **Conditions of trouble**

Record the above information in the table below for future inquiries.

Type	
Serial No.	
Purchase Date	
Lift Supplier	
Installer	
Trouble Date and conditions	Date :

	Date :

	Date :

Bishamon



Sugiyasu Corporation

3-21, 4-Chome, Hongo-Cho, Takahama City,
Aichi, Japan 444-1394

Tel. 81-566-53-1126, Fax. 81-566-53-1844
<http://www.bishamon.co.jp/>