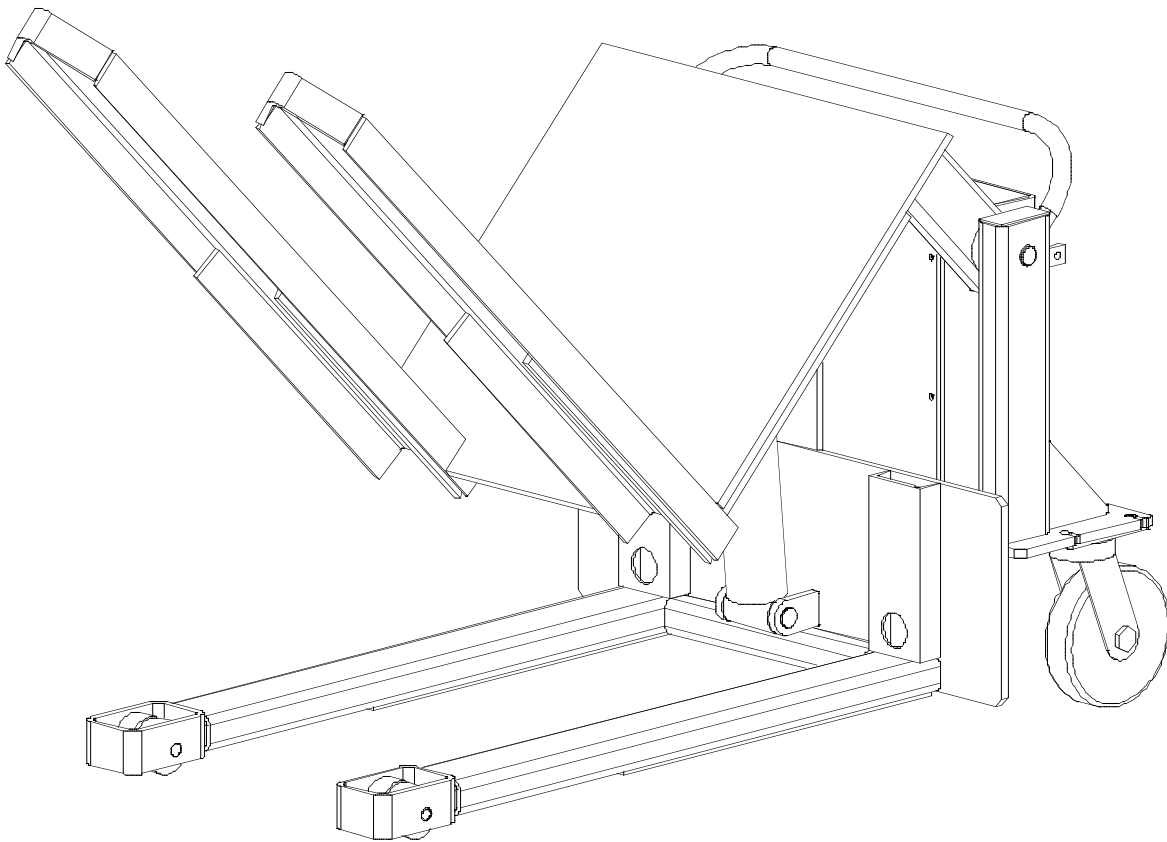


INSTALLATION, OPERATION, AND SERVICE MANUAL

AUTO-TILT PORTABLE FILTER



P.O. Box 1058 • 1058 West Industrial Avenue Guthrie, OK 73044-1058 • 405-282-5200 •
FAX: 405-282-8105 • www.autoquip.com

Item # 830STR

Version 1.0
05/2002

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IMPORTANT

Please read and understand this manual prior to installation or operation of this unit. Failure to do so could lead to property damage and/or serious personal injury. If any questions arise, call a local representative or *Autoquip Corporation* at 1-888-811-9876 or 405-282-5200.

PLANNED MAINTENANCE PROGRAM

A local *Autoquip* representative provides a Planned Maintenance Program (PMP) for this equipment using factory-trained personnel. Call a local representative or *Autoquip Corporation* at 1-888-811-9876 or 405-282-5200 for more information.

IDENTIFICATION & INSPECTION

IDENTIFICATION

When ordering parts or requesting information or service on this unit, PLEASE REFER TO THE MODEL AND SERIAL NUMBER. This information is on a nameplate attached to the assembly. Replacement parts are available from a local *Autoquip* distributor.

INSPECTION

Immediately upon receipt of the unit, a visual inspection should be made to determine that it has not been damaged in transit. Any damage found must be noted on the delivery receipt. In addition to this preliminary inspection, the unit should be carefully inspected for concealed damage. Any concealed damage found that was not noted on the delivery receipt should be reported in writing to the delivering carrier within 48 hours.

The following is a checklist that will aid in the inspection of the tilter.

1. Examine the entire unit for any signs of mishandling. Pay special attention to the power unit and controls.
2. Thoroughly examine all connections, making sure they have not vibrated loose during transit.
3. After installation, raise the tilter and inspect the base frame, platform, rollers, and cylinder plumbing connections.

DANGERS, WARNINGS & CAUTIONS

SAFETY ALERTS (Required Reading!)

The following SAFETY ALERTS are intended to create awareness of owners, operators, and maintenance personnel of the potential safety hazards and the steps that must be taken to avoid accidents. These same alerts are inserted throughout this manual to identify specific hazards that may endanger uninformed personnel. Identification of every conceivable hazardous situation is impossible. Therefore, all personnel have the responsibility to diligently exercise safe practices whenever exposed to this equipment.



DANGER!

Identifies a hazardous situation that presents the imminent probability of death or of severe personal injury!!



WARNING!

Identifies a hazardous situation that has the potential of causing death or serious personal injury.



CAUTION!

Identifies a hazardous situation that could lead to the possibility of personal injury of death, and/or may result in equipment damage.

DANGERS, WARNINGS & CAUTIONS

Read and understand this manual and all labels prior to operating or servicing this Tilter. All labels are provided in accordance with ANSI Z535.4.



DANGER!

To avoid personal injury, stand clear of tilter mechanism while it is in motion.



DANGER!

HIGH VOLTAGE!! Disconnect and/or lock out the electrical supply to the power unit prior to any maintenance being performed.



DANGER!

Tilters are designed individually for a specific load and application. To avoid personal injury, do not change the load or application from the original design.



DANGER!

To avoid personal injury, NEVER go under the tilter platform until the load is removed and the platform is securely blocked in position.



DANGER!

To avoid personal injury, NEVER use the unit in or around water or where flammable gasses may be present.

DANGERS, WARNINGS & CAUTIONS



WARNING!

NEVER stand, sit or ride on the Tilter.



WARNING!

All warning and information decals should be in place as outlined in the “Label Identification” section. If decals are missing or damaged, they should be replaced with new ones. Contact *Autoquip* for replacements.



WARNING!

To avoid personal injury, make sure the unit is positioned on a flat and level surface. The tilter may tip over when in use.



WARNING!

To avoid injury, use the floor lock when the unit is in use. Failure to use the floor lock may cause the unit to roll when it is in use.



WARNING!

To avoid injury, do not move the tilter with a load in the tilted position. The tilter may be unstable causing the unit to tip.



CAUTION!

Do not continue to depress the “TILT” or “TILT RETURN” button on the controller if the tilter is not raising. To do so may result in permanent damage to the motor or pump.

DANGERS, WARNINGS & CAUTIONS



CAUTION!

Never run the pump for more than a couple of seconds without pumping oil. This applies to low oil conditions, improper motor rotation, running the pump against the relief pressure, running overloaded beyond capacity, or running at reduced speed because of pinched or obstructed hydraulic lines.



CAUTION!

Do not operate the power unit on relief for more than a few seconds. When on relief, the valve will make a squealing sound.



CAUTION!

Precautions should be taken to prevent the introduction of contaminants such as dirt or other foreign material into the system through open fittings, pipes or disassembled components. Contamination will ruin the hydraulic system.



CAUTION!

Use only approved oils in the filter. See “Specifications” section.

LABEL IDENTIFICATION

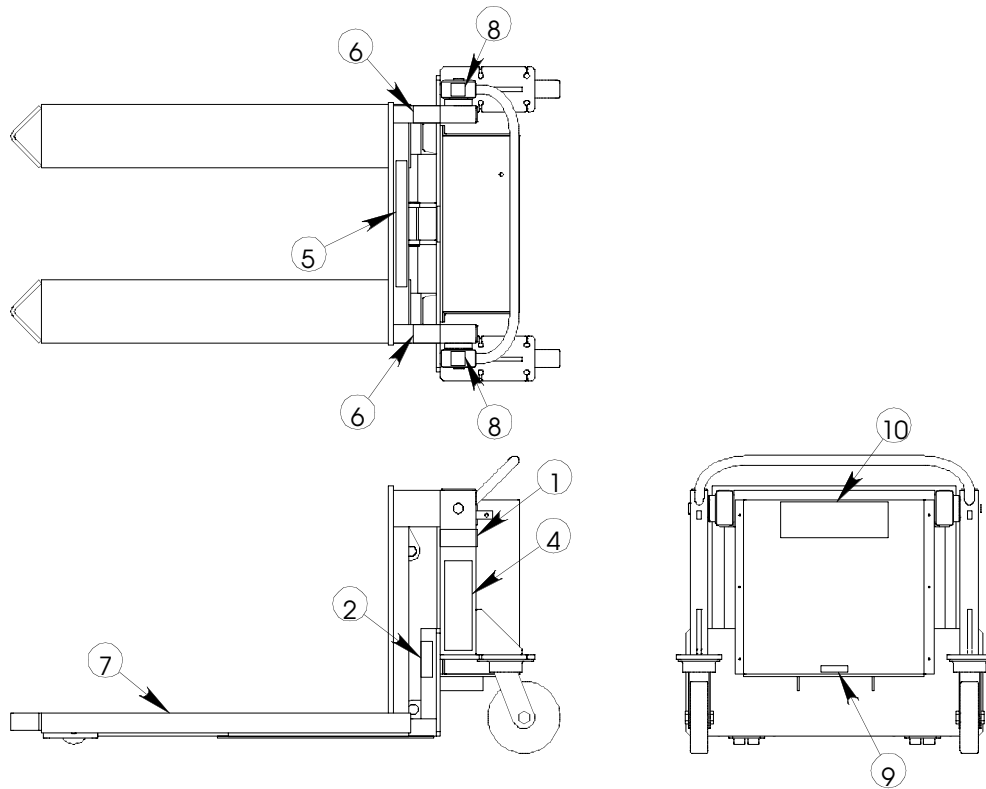


Figure 1 Label Placement Diagram

Auto-Tilt Portable Tilter			
Item No.	Qty	Description	Part No.
1	2	Warning – No Riders	36403707
2	1	Maintenance Device	36400257
3	1	Fill with Recommended Oils Only	36400661
4	1	Serial Nameplate	36404250
5	2	Capacity	36401586
6	4	Warning – Stand Clear When Tilting	36403830
7	1	2” Stripe Tape	06100028
8	1	Up Down	36405190
9	1	Set Brake	36405200
10	1	Auto-Tilt Logo	36405300

LABEL IDENTIFICATION

Note: Labels shown here are not actual size.



Figure 2 Label 36403707



Figure 3 Label 36400257



Figure 4 Label 36400661

LABEL IDENTIFICATION

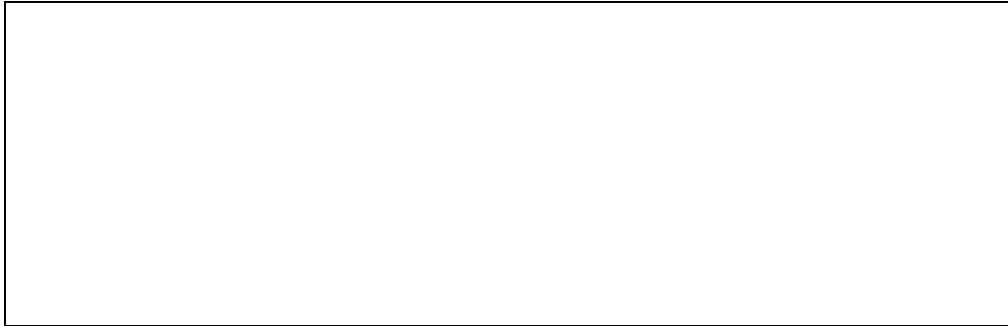


Figure 5 Label 36401511



Figure 6A Label 36405280



Figure 6B Label 36405290



Figure 7 Label 36403830

LABEL IDENTIFICATION

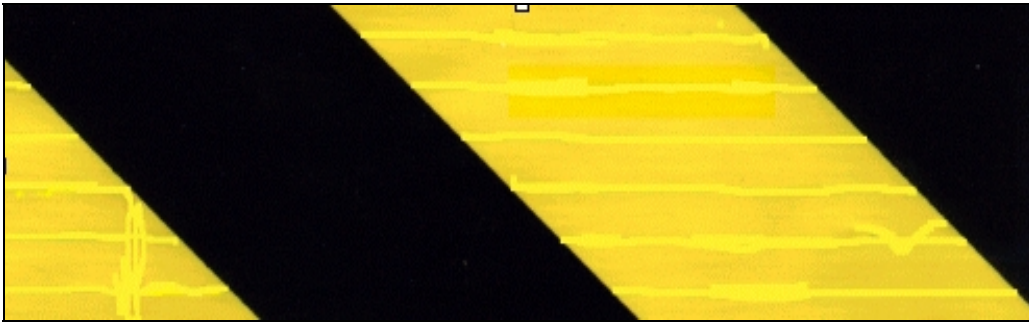


Figure 8 Label 06100028



Figure 9 Label 36405190

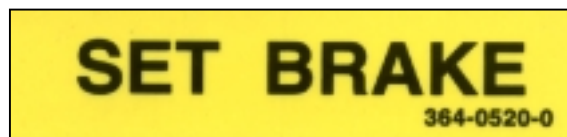


Figure 10 Label 36405200



Figure 11 Label 36405300

SPECIFICATIONS

Model	Capacity	Tilt Angle	Fork Length	Height	Weight	Raise Time
STR 89-20	2000 lbs	89 degrees	42"	33 _"	675 lbs	20 sec
STR 89-40	4000 lbs	89 degrees	42"	33 _"	675 lbs	20 sec

LOAD CAPACITY

The load capacity rating is stamped on a metal plate attached to the tilter. This figure is a net capacity rating for a tilter furnished with the standard platform. The relief valve of the pumping unit has been set to raise the weight, plus a small amount for overload. **Tilters should not be overloaded beyond the established capacity as damage and/or personal injury may result.**

UNBALANCED LOADING

The stabilization provided is basically for balanced loads. If special attachments extend beyond the length and/or width dimensions of the platform, the capacity would be reduced.

PUMP PRESSURE (AC AND AIR/OIL POWER UNITS)

This lift incorporates a positive displacement pump machined to a high degree of accuracy and specially adapted to requirements of higher-pressure ranges over that of a standard pump. Therefore, standard factory models of the same manufacture cannot replace it.

The pump can operate efficiently at intermittent pressures up to 3200 PSI and continuous duty to 2500 PSI. The safety relief valve in the power unit is factory-set to stay within the parameters of the pump and lift requirements.

PNEUMATIC

- Internal air power unit
- Minimum working pressure 80 psi @ 110 cfm

BLOCKING INSTRUCTIONS

1. Remove all load from the platform. Never block the lift when loaded.
2. Raise the tilter by moving the lever in the “UP” direction.
3. The maintenance leg is stored in a socket on the base. Place the end of the maintenance leg in the socket of the base of the tilter.
4. Begin lowering the tilter by moving the lever in the “DOWN” direction while guiding the leg so that the socket on the back of the platform comes down over the top of the maintenance leg.
5. Continue to keep the lever in the “DOWN” position for five to ten seconds after the maintenance leg contacts the platform to relieve the hydraulic pressure in the cylinder.
6. Check to be certain that the maintenance leg is securely in the socket on the platform and the socket on the base.



DANGER!

To avoid personal injury, NEVER go under the platform until the load is removed and the lift is securely blocked.

7. To remove the maintenance leg, raise the tilter by moving the lever in the “UP” direction to provide sufficient clearance for the removal of the maintenance leg. Remove and return the maintenance leg to its storage location on the tilter base.

BLOCKING INSTRUCTIONS

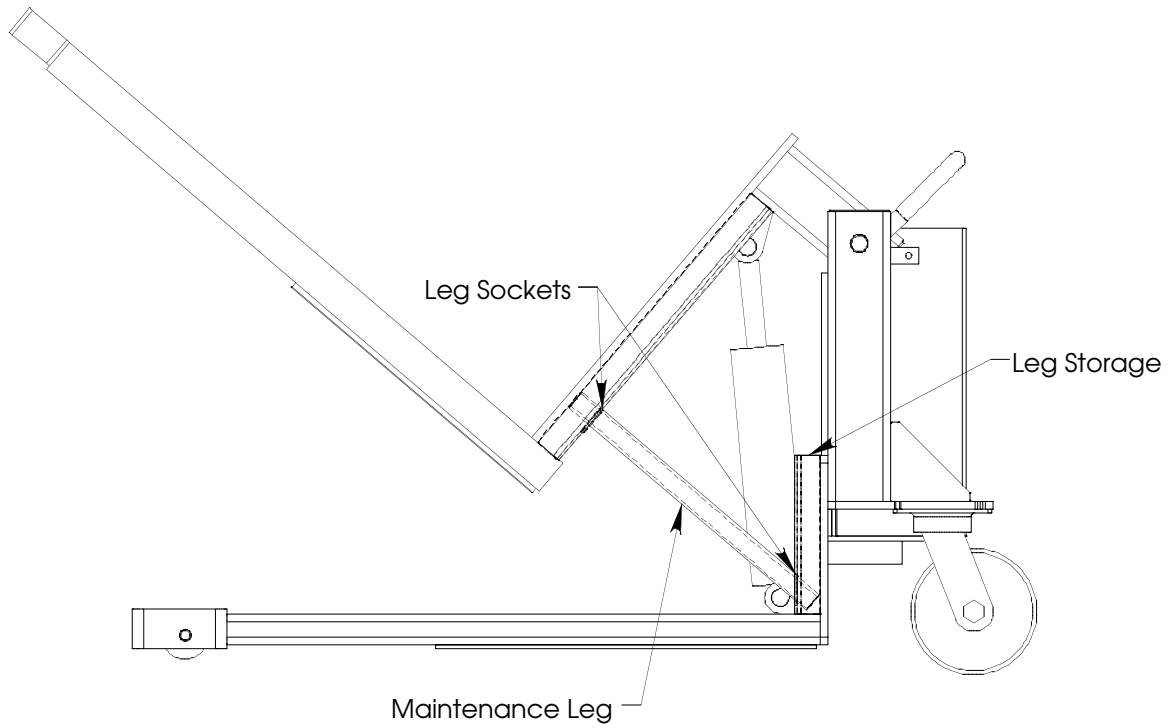


Figure 12 Maintenance Device

INSTALLATION INSTRUCTIONS

OIL

The Auto-Tilt is shipped with oil in the power unit. There is no need to fill it.

STANDARD DC UNIT



WARNING!

Read and understand all of the instructions carefully before proceeding with the installation process.

1. The area where the Auto-Tilt is to be used must be level, solid, and smooth. The unit should roll around freely without obstruction.



DANGER!

To avoid personal injury, NEVER use the unit in or around water or where flammable gasses may be present.

2. Remove the material the tilter was shipped in. Remove the banding and the pallet from under the unit.
3. Connect the red positive battery cable. It may be necessary to charge the battery before the tilter can be used. If the unit was purchased with the optional battery charger, it may be placed next to the battery.
4. Test the operation of the tilter by moving the lever in the “UP” position. Then move the lever to the “DOWN” position to lower the platform. If the tilter does not work, see the “Troubleshooting” section in this manual.



WARNING!

All warning and information decals should be in place as outlined in the “Label Identification” section. If decals are missing or damaged, they should be replaced with new ones. Contact *Autoquip* for replacements.

INSTALLATION INSTRUCTIONS

OPTIONAL 115/60 AC UNIT



WARNING!

Read and understand all of the instructions carefully before proceeding with the installation process.

1. The area where the Auto-Tilt is to be used must be level, solid, and smooth. The unit should roll around freely without obstruction.



DANGER!

To avoid personal injury, NEVER use the unit in or around water or where flammable gasses may be present.

2. Remove the material the tilter was shipped in. Remove the banding and the pallet from under the unit.
3. Plug the power cord into a suitable 20 amp grounded 115/60 receptacle.
4. Test the operation of the tilter by pressing the “UP” button. Then push the “DOWN” button to lower the platform. If the tilter does not work, see the “Troubleshooting” section in this manual.



WARNING!

All warning and information decals should be in place as outlined in the “Label Identification” section. If decals are missing or damaged, they should be replaced with new ones. Contact *Autoquip* for replacements.

INSTALLATION INSTRUCTIONS

OPTIONAL AIR POWER UNIT UNIT



WARNING!

Read and understand all of the instructions carefully before proceeding with the installation process.

1. The area where the Auto-Tilt is to be used must be level, solid, and smooth. The unit should roll around freely without obstruction.



DANGER!

To avoid personal injury, NEVER use the unit in or around water or where flammable gasses may be present.

2. Remove the material the tilter was shipped in. Remove the banding and the pallet from under the unit.
3. Connect the power unit to the air supply. Make sure that the minimum working pressure is 80 psi @ 110 cfm.
4. Test the operation of the tilter by moving the lever in the “UP” position. Then move the lever to the “DOWN” position to lower the platform. If the tilter does not work, see the “Troubleshooting” section in this manual.



WARNING!

All warning and information decals should be in place as outlined in the “Label Identification” section. If decals are missing or damaged, they should be replaced with new ones. Contact *Autoquip* for replacements.

OPERATING INSTRUCTIONS

Be familiar with this entire operator's manual before operating this equipment.

LOADING TILTER

1. Operate this tilter only on a firm, flat surface.
2. Position the tilter under the item to be tilted and lock the floor lock. Center the load on the tilter.
3. Load the tilter uniformly and make sure the load is centered on the tilter.
4. Make sure the load is resting against the back of the tilt platform.

TILTING THE PLATFORM

1. Before raising or lowering the tilter, make sure that all obstacles and people are clear of the unit and that the floor lock is in the locked position.
2. To raise the platform, move the lever to the "UP" position and hold until the platform reaches the desired height.
3. To lower the platform, move the lever in the "DOWN" position and hold until the platform reaches the desired height.
4. If the tilter does not work, see the "Troubleshooting" section in this manual.



WARNING!

To avoid injury, do not move the tilter with a load in the tilted position. The tilter may be unstable causing the unit to tip.

ROUTINE MAINTENANCE

Normally tilters will require very little maintenance. However, a routine maintenance program could prevent costly replacement of parts and/or downtime.



DANGER!

To avoid personal injury, NEVER go under the tilter platform until the load is removed and the platform is securely blocked in position.

MONTHLY INSPECTION

1. Check oil level (see oil recommendations in this section) and add appropriate oil when necessary.
2. Check for any visible leaks. Correct as necessary.
3. Check any unusual noise when it occurs. Determine the source and correct as necessary.
4. Check all wiring for looseness or wear. Repair at once.

OIL REQUIREMENTS

Change oil yearly, or more frequently if it darkens materially or feels gummy or gritty. Do not use hydraulic-jack oil, hydraulic fluids, brake fluids, or automatic transmission fluid.

OIL CAPACITY

Oil capacity for the Auto-Tilt is two quarts.

ROUTINE MAINTENANCE

Oil Viscosity Recommendations

Environment (Ambient Temperatures)	Recommended Oil
Indoor location, variable temperatures (30° - 100° F)	10W30 or 10W40 Multiviscosity motor oil
Indoor location, consistent temperatures (60° - 80° F)	SAE-20W motor oil
Outdoor location, (30° - 120° F)	10W30 or 10W40 Multiviscosity motor oil
Outdoor location, (-10° - 120° F)	SAE 5W20 or SAE 5W30 Multiviscosity motor oil
Cold-storage warehouse (10° - 40° F)	10W Multiviscosity motor oil
Freezer (-40° F to 0° F)	Consult Factory

NOTE: all are detergent type oils.

PIPE THREAD SEALANT

Loctite PST #567 pipe thread sealant or equivalent is recommended. **Do not use Teflon tape.** Tape fragments can cause malfunctioning of the hydraulic system.

POWER UNIT

Electric (DC) Standard

- 12 volt battery operated
- Internal power unit

Electric (AC)

- 115/60 single phase _ hp “super-torque” motor
- Full load AMP draw - 16.6
- Fuse size – 45 AMPs
- Circuit breaker – 40 AMPs

GENERAL MAINTENANCE

CYLINDER REPACKING

1. Install the maintenance leg. See “Blocking Instructions” section.



DANGER!

To avoid personal injury, NEVER go under the tilter platform until the load is removed and the platform is securely blocked in position.

2. Disconnect the power source.



DANGER!

HIGH VOLTAGE!! Disconnect and/or lock out the electrical supply to the power unit prior to any maintenance being performed.

3. Disconnect the cylinder hose from the cylinder and insert into a container to receive oil spillage.
4. Remove the pin retaining rings and carefully tap out the clevis pin to avoid damaging the clevis pin bushings. Remove the cylinder.
5. Push the rod fully into the jacket assembly to eject any remaining oil.
6. Using a spanner wrench, turn the gland nut counter-clockwise to unscrew it from the jacket assembly.
7. Pull the rod out of the jacket slowly to remove the rod, piston and gland nut. **NOTE: Use caution to prevent surface damage to the rod that could result in seal failure and/or leakage.**
8. Inspect the bore of the jacket.hone if necessary to remove any surface imperfections in the bore. Flush thoroughly after honing to remove chips and grit.
9. Remove the piston locknut and slide the piston and gland nut off of the rod. Take care to protect the rod surface from damage.

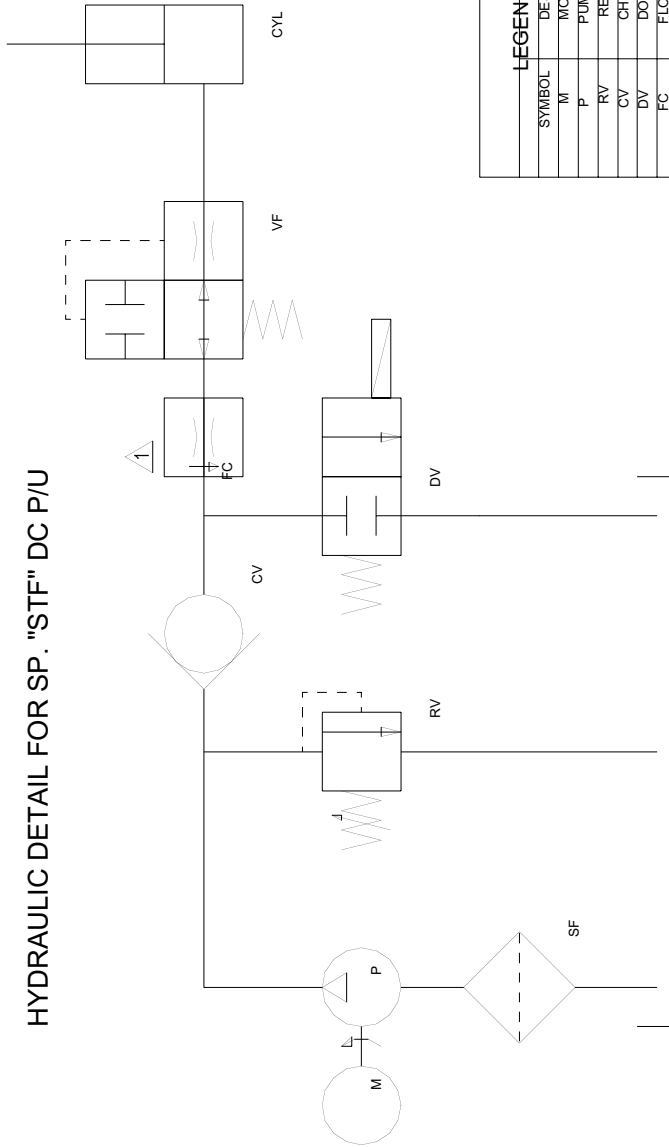
GENERAL MAINTENANCE

10. Install new packing and seals on the piston, rod, and gland nut. Inspect all grooves and seal surfaces for any imperfections and repair or replace as necessary.
11. Grease all seals and packing liberally with grease or equivalent, and install the gland nut and the piston on the rod. Torque the locknut to 500 ft-lbs.
12. Install the rod into the jacket assembly taking care not to damage any seals or packing.
13. Using a spanner wrench, turn the gland nut clockwise until it is completely inserted in the jacket assembly.
14. Check the clevis pin bushings in the cylinder rod for wear and replace as necessary.
15. Install the assembled cylinder into the tilter by carefully inserting the clevis pin through the clevis and cylinder rod. Be sure the clevis pin is free of nicks and burrs. Extreme care must be taken to prevent damage to the clevis pin bushings. Install the retaining rings and washers on the pin (cylinder rod may be extended by hand).
16. Connect the cylinder hydraulic hose using the recommended sealant.
17. Check all pins and other mechanical components as well as the hydraulic components to assure that the assembly is complete and in good condition.
18. Connect the power source back up and bump the "UP" lever. Bleed the system of air.
19. Raise the tilter and remove the maintenance leg; return it to its storage location on the tilter base.
20. Raise and lower the tilter to help remove air from the system.
21. Check the oil level in the reservoir with the tilter in the fully lowered position. Add oil as necessary (see "Specifications" section).
22. Clean the oil filler breather cap if it appears dirty.

GENERAL MAINTENANCE

658-1984-0

HYDRAULIC DETAIL FOR SP. "STF" DC P/U



LEGEND	
SYMBOL	DESCRIPTION
M	MOTOR
P	PUMP
RV	RELIEF VALVE
CV	CHECK VALVE
DV	DOWN VALVE 12 VDC
FC	FLOW CONTROL
VF	VELOCITY FUSE
CYL	CYLINDER
SF	SUCTION FILTER

1	REDRAWN IN AUTOCAD. MOVED FC, REVISED DESCRIPTION	DM	11/17/01
REV	DESCRIPTION	BY	DATE
JOB TITLE:		C/PROP. NO.:	
Autoquip			
REFERENCE DR. I/MS:	DR. I/MS TITLE:	DR. I/MS I/MS/EEF:	DR. I/MS I/MS/EEF:
-PPRO I/MS I/MS/EEF:	DR. I/MS I/MS/EEF:	DR. I/MS I/MS/EEF:	DR. I/MS I/MS/EEF:
CG/TB	9/26/96	1 OF 1	658-1984-0
A			

Figure 13 Hydraulic Schematic

GENERAL MAINTENANCE

VELOCITY FUSE REPLACEMENT



DANGER!

Do not attempt to remove the velocity fuse until the hydraulic pressure has been removed from the lifting cylinders and hydraulic hoses. Failure to follow these instructions could result in personal injury or death!

Never attempt to take a velocity fuse apart and repair it. These are precision devices that are factory assembled under exacting conditions. Velocity fuses should always be replaced.

1. The arrow on the exterior surface of the velocity fuse shows the direction of the restriction to the oil flow. The arrow should always point away from the cylinder.
2. **Do not use Teflon tape on the threaded connections of a velocity fuse.** Tape fragments can cause malfunctioning of the fuse.
3. Check all fitting connections for hydraulic leaks and tighten as necessary.

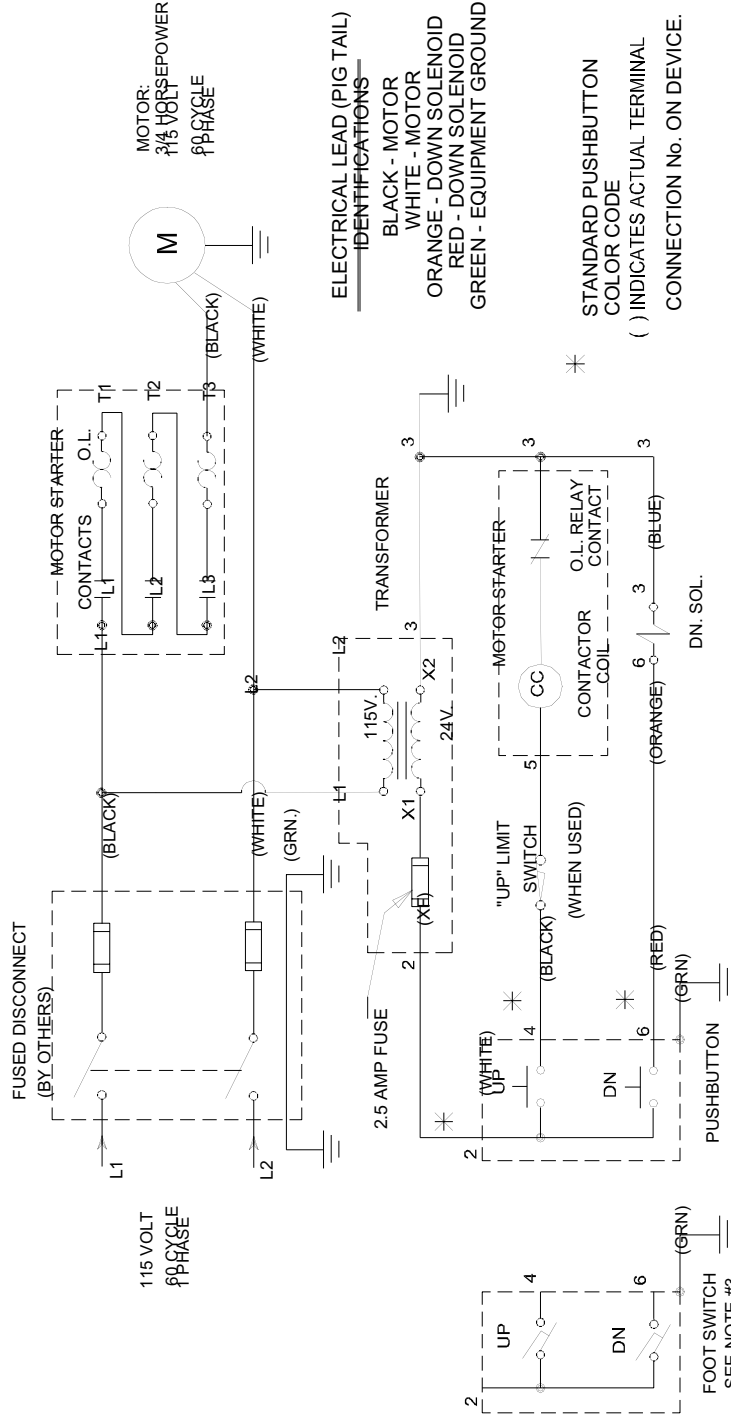
HOSE ORIENTATION

To prevent damage to the cylinder hose and possible failure of tilter, it is necessary to establish a correct hose shape and pattern of movement as follows:

1. Tilt the tilter platform.
2. Tilt the tilter carefully and check to see that the hose is free and clear of the cylinder and the linkage assemblies. If not, twist the hose in the direction necessary to clear it of any obstruction and then lock the swivel fitting securely.

GENERAL MAINTENANCE

65807448



ELECTRICAL LEAD (PIG TAIL) IDENTIFICATIONS
 BLACK - MOTOR
 WHITE - MOTOR
 ORANGE - DOWN SOLENOID
 RED - DOWN SOLENOID
 GREEN - EQUIPMENT GROUND

STANDARD PUSHBUTTON COLOR CODE
 () INDICATES ACTUAL TERMINAL CONNECTION No. ON DEVICE.

NOTES:

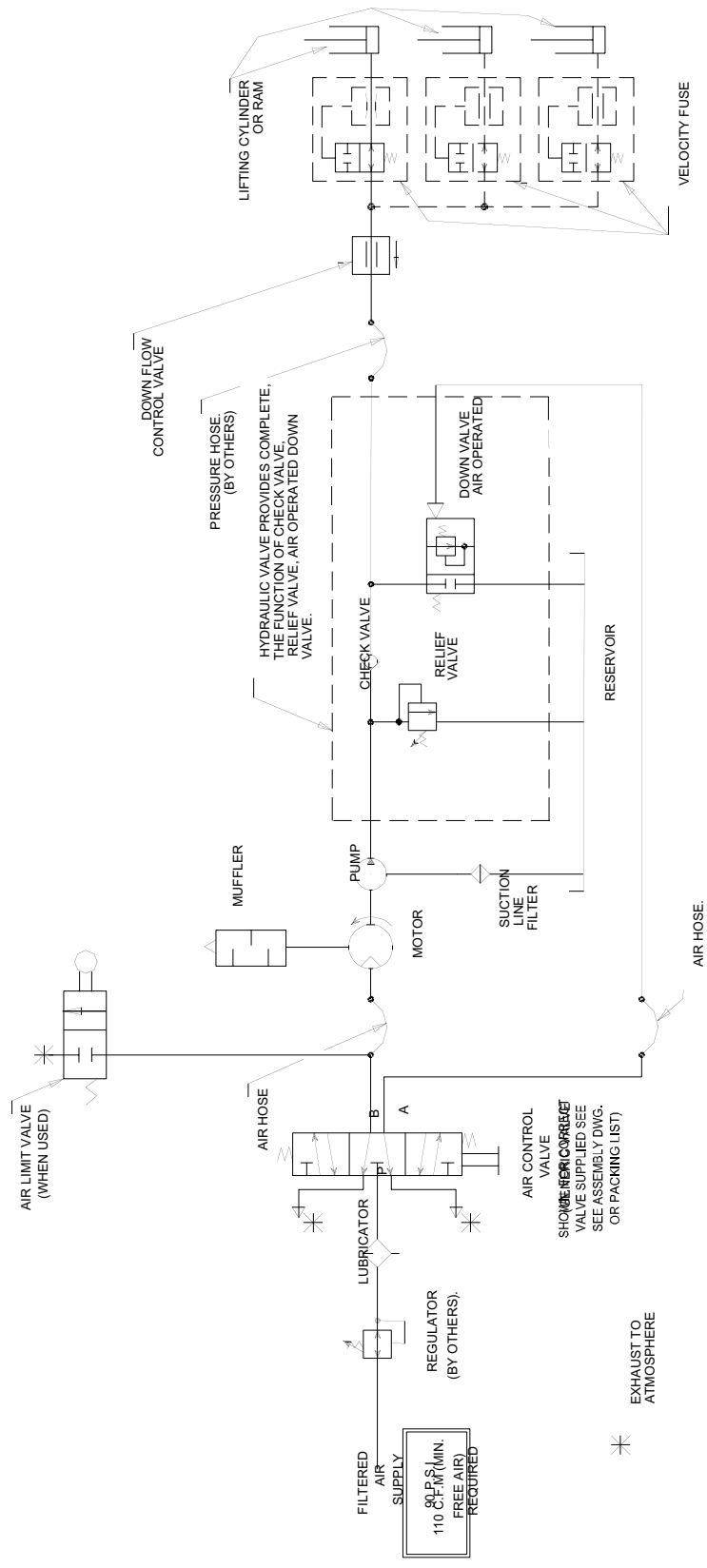
1. MOTOR STARTER, CONTROL TRANSFORMER, OVERLOADS, AND FUSES TO BE MOUNTED IN NEMA 1 ENCLOSURE, PRE-WIRED, AND MOUNTED TO POWER UNIT.
2. TRANSFORMER PRIMARY CONNECTION DIAGRAMS ARE LOCATED ON INSIDE OF FRONT COVER.
3. OPTIONAL FOOTSWITCH W/ GUARD (NEMA 1) SHIPPED LOOSE WHEN ORDERED. TO BE INSTALLED AND WIRED (BY OTHERS)

ELECTRICAL SCHEMATIC
 TYPICAL PILOT CONTROLS ONLY

1	REDRAWN; PUT ON CAD; REVISED THRU-OUT FOR ABB.	SS	7/22/94
REV DESCRIPTION		BY	DATE
JOB TITLE:			
Autoquip			
REFERENCE (P-III):		P-III TITLE	
STD WIRING SCHEMATIC, SERIES 35,3/4 HP/115 V/1 PH			
DP-III B:	DP-III E:	DP-III F:	DP-III G:
SC	3/31/88	1 OF 1	1
JOB NO.:		65807448	
REV:		A	

Figure 14 Electrical Schematic – 115VAC/1PH Models

65825000



QUANTITY OF CYLINDER / RAMS AND VELOCITY FUSES DEPENDS ON THE (1) NUMBER OF FUSES PER CYLINDER / RAM.

AIR / HYDRAULIC SCHEMATIC

		JOB TITLE:		OFFICE ID:	
©2002 COPRIGHT RECEIVED AUTOGQUIP CORPORATION	REFERENCE: 65808750	OPERATING TITLE: AIR/HYD. SCHEM FOR AIR MOTOR P.U. - DELTA	DATE: 8/22/00	QUANTITY: 1 OF 1	SHEET: 65825000
This drawing is the sole property of Autogquip Corp. and cannot be used for design and construction without permission of Autogquip Corp.		PART: TB	QTY: 1	PAGE: 1 OF 1	SHEET: A

Figure 15 Air Schematic

REPLACEMENT PARTS LIST

PART NUMBER	DESCRIPTION
	Electrical
30000020	Motor, _ hp , single phase
35107910	Prewired Controller, 115 v, _ hp
37200240	Battery Charger, 12 v, 10 a
48000400	DC Power Unit, 12 v
	Hydraulic
35105130	Pump, 1.4 GPM, 3450 RPM w/ 24VAC Coil
41050139	Suction Strainer
41501776	Flow Control Valve
42000018	Cylinder, Air Mite Hydraulic
41800558	Velocity Fuse
42600780	Cylinder Assembly, 3 x 10, SA, W/DU
46000055	Rubber Hose, _" x 18" with swivel
47900006	Breather Plug
64200603	Hydraulic Reservoir
	Pneumatic
20019006	Air Mite Cylinder
28003234	Pneumatic Lubricator
40800013	Air Motor with Muffler
40900029	Muffler
41400755	4-Way Valve, Lever Operated
	Mechanical
20022851	Bushing, 18 DU 12
20035100	Wheel, 3"
45400082	Retaining Ring, 1 1/8"
52504790	Pin, 1 1/8" x 3"
52504830	Pin, 13/4" x 4"
52600251	Roller, 1 _" x 3" x _"
60604520	Caster Assembly

TROUBLESHOOTING ANALYSIS



DANGER!

To avoid personal injury, **NEVER** go under the tilter platform until the load is removed and the platform is securely blocked in the open position.

PROBLEM	POSSIBLE CAUSE AND SOLUTION
Tilter does not raise.	<ul style="list-style-type: none">• The motor voltage or wiring may be incorrect.• Check for a line or hose leak.• Check for oil shortage in the reservoir. Add oil as necessary (See Oil Requirements in the “Routine Maintenance” section.)• The load may exceed the rating. (See the “Specifications” section.) Remove the excess load.• The suction screen may be clogged, starving the pump. Remove and clean the screen. Drain and replace the oil.• The suction line may be leaking air due to a loose fitting. Tighten as needed.• The breather holes in the reservoir fill plug may be clogged. Remove and clean.• The pump may be seized if motor is humming or blowing fuses on overload protection devices. Remove the pump. The pump should be able to be rotated by hand. Check for cracks in the housing.• The battery may not be charged. Charge battery.• The power unit valve may be open.• The air pressure is too low.

TROUBLESHOOTING ANALYSIS

PROBLEM	POSSIBLE CAUSE AND SOLUTION
Tilter raises very slowly.	<ul style="list-style-type: none">• Check for pinched tubing or hose. Where pipe is used, check for obstruction in the line.• The oil is extremely viscous due to low ambient temperatures. Add or replace with lower weight oil that stays thinner in cold conditions (5W-15, etc.)• The motor voltage or wiring may be incorrect.• Check for a line or hose leak.• Check for oil shortage in the reservoir. Add oil as necessary (See Oil Requirements in the “Routine Maintenance” section.)• The pump may be seized if motor is humming or blowing fuses on overload protection devices. Remove the pump. The pump should be able to be rotated by hand. Check for cracks in the housing.• The battery may not be charged. Charge battery.• The air pressure is too low.

TROUBLESHOOTING ANALYSIS

PROBLEM	POSSIBLE CAUSE AND SOLUTION
<p>Tilter won't lower.</p>	<ul style="list-style-type: none"> • The solenoid may be incorrectly wired, burned out, not rated for the voltage, or the line voltage may be excessively low. Check voltage near the coil. • Check for pinched or broken tubing or hose. Where pipe is used, check for obstruction in the line. • Check for any obstacles that may be blocking the platform. • The maintenance leg may be installed. Remove maintenance leg. • The velocity fuse may be locked. Do not attempt to remove the velocity fuse. The following steps should be followed: <ol style="list-style-type: none"> 1. Remove the load from the Tilter. Inspect all fittings, hoses, and other hydraulic components for leaks or damage. 2. If no leak or damage is noticed, attempt to pressurize the lifting cylinder by depressing the "Tilt" button on the controller for a few seconds. Immediately upon releasing the "Tilt" button, depress the "Tilt Return" button. If the Tilter starts to lower, continue pressing the "Tilt Return" button until it is in the fully lowered position. 3. If the Tilter does not lower after trying Step 2, wait approximately 10 – 15 minutes for the pressure in the hydraulic system to equalize. • Should the above steps not correct the problem, contact <i>Autoquip</i> to obtain instruction for further action.

TROUBLESHOOTING ANALYSIS

PROBLEM	POSSIBLE CAUSE AND SOLUTION
Tilter lowers slowly.	<ul style="list-style-type: none"> • Check for pinched or broken tubing or hose. Where pipe is used, check for obstruction in the line. • The return filter may be clogged. Check and clean as necessary.
Tilter raises, then drifts back slowly.	<ul style="list-style-type: none"> • The oil line, hose, or fitting may be leaking. Check and repair if necessary. • The “check valve” may not be seating. This is indicated by the pump shaft and motor turning backward on their own with no power applied. Generally, this condition can be heard. Replace the pump assembly. • Cylinder packing may be leaking. • The regulator may not be seating.
Tilter seems bouncy during operation.	<ul style="list-style-type: none"> • Power unit suction line may be leaking. • Oil reservoir may be low. Check levels and fill as necessary. See “Specifications” section. • May be air in the hydraulic. Bleed the hydraulic lines. • Battery connections may be loose. Check connections.