

Tailgates By THIEMAN

TT-15 OWNERS MANUAL/PARTS LIST

SHOWN WITH OPTIONAL 2 PC. ALUMINUM PLATFORM AND LIGHT KIT

IMPORTANT! KEEP IN VEHICLE!

PLEASE READ AND UNDERSTAND THE CONTENTS OF THIS MANUAL BEFORE OPERATING THE EQUIPMENT.





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TABLE OF CONTENTS

PARTS ORDERING PROCEDURE
SAFETY INFORMATION AND WARNINGS
OPERATING INSTRUCTIONS
MAINTENANCE GUIDE & MONTHLY INSPECTION AND
MAINTENANCE
SEMI-ANNUAL INSPECTION AND MAINTENANCE
ACCESSING SPARE TIRE JACK 11
DECAL MAINTENANCE - INSPECTION AND LOCATION OF DECALS 12
PUMP & CYLINDER ASSEMBLY 13
UNDERCARRIAGE FOR NON-TORSION ASSIST PLATFORMS 14 & 15
26" DEEP STEEL DECKPLATE NON-TORSION ASSIST PLATFORMS 16
ALUMINUM EXTRUSION NON-TORSION ASSIST PLATFORMS 17
UNDERCARRIAGE AND 42" DEEP STEEL
TORSION ASSIST PLATFORM ASM
UNDERCARRIAGE AND 44" DEEP ALUMINUM
TORSION ASSIST PLATFORM ASM
MOUNTING HARDWARE PARTS LIST
OPTIONAL BUMPER-LIGHT ASSEMBLY
TAIL LIGHT WIRING DIAGRAM. 27
ELECTRICAL PICTORIALS
TROUBLESHOOTING GUIDE 29-31

FOR YOUR RECORDS

Model No. _____ Date Purchased _____

Serial No.

NOTE: WHEN ORDERING PARTS BE SURE TO INCLUDE THIS INFORMATION!

Your Thieman Tailgate is constructed of top quality material and is warranted to be free from defects in material and workmanship under normal use. With routine maintenance and proper operation this liftgate will provide long lasting service and dependability.

PARTS ORDERING PROCEDURE

When ordering parts, please include all the information asked for below. If this information is not available, a complete written description or sketch of the required part will help Thieman identify and deliver the needed part to you.

THE FOLLOWING INFORMATION MUST BE INCLUDED:

- 1. Serial Number Thieman liftgate serial numbers can be found on the tag located on the outside of the curb side mounting plate.
- 2. Model Number and Capacity.
- 3. Platform size and Material Steel or Aluminum.
- 4. Part number.
- 5. Description.
- 6. Quantity required.

SAFETY INFORMATION

This is the safety alert symbol. This manual uses this symbol combined with the Signal Words below, which together, alert you of potential personal injury hazards. **Obey all safety messages throughout this manual, including those that follow the Signal Words below, to avoid personal injury or death.** Each Signal Word is explained below.

SIGNAL WORDS used in this manual

DANGER – Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

Related information will follow

WARNING – Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

Related information will follow



CAUTION – Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

Related information will follow

IMPROPER OPERATION OF THIS LIFTGATE MAY RESULT IN SERIOUS PERSONAL INJURY AND/OR DEATH. DO NOT operate this liftgate unless you have been properly instructed and have read and understood the Owner's Manual and all of its warnings, operating instructions and all decals.

The following list of warnings is to be read and understood before operating the TT15 series liftgate. The numbered list begins below and continues on the following pages.

WARNINGS!

- 1. DO NOT operate this Thieman liftgate without the Owner's Manual for this model present on the vehicle and without all decals present and legible, as guides for proper liftgate operation and maintenance (see the "Decal Maintenance - Inspection and Location of Decals" section of this manual). For replacement Owner's Manuals, decals, etc. call Thieman at 419-586-7727. For the latest manuals and warnings for each liftgate, visit our website at www.thiemantailgates.com. Note: manuals and warnings update regularly.
- 2. The vehicle must be securely and properly braked on level ground before using the liftgate.
- 3. All protective covers and guards must be in place before operating the liftgate.
- 4. Before using liftgate, check for signs of improper maintenance or damage (unusual noises, vibrations, fails to operate freely, missing hardware, cracked welds...etc. See the sections in this manual with "Maintenance" in the title refer to "Table of Contents" on Page 2). DO NOT use the lift if these are evident. Only an authorized Thieman distributor is qualified to do repairs on the liftgate. DO NOT attempt to do your own repairs or modify this liftgate. Altering this product will void all warranties and may damage the liftgate or even cause serious injury. If any repairs, adjustments, or maintenance not covered in this manual are required, contact your nearest Thieman distributor or call Thieman at 419-586-7727.
- 5. THIS IS NOT A PERSONNEL LIFT. Because of the pinch point between the platform and the truck, fall hazards, unstable loads, etc., riding the lift may cause severe personal injury or death. ALWAYS stay clear of the liftgate when in operation. Do NOT ride the liftgate.
- 6. Make certain the areas, in which the platform will open or close, are clear before opening or closing the platform.
- 7. Use this liftgate ONLY for its intended purpose of loading/unloading cargo between truck bed and ground. It is NOT to be used for anything other than this. The ground is defined as the surface the truck is parked on.

(Warnings continued on following pages)

- 8. DO NOT use this liftgate to load or unload cargo from any elevated surface such as a dock, sidewalk, raised concrete slab, etc. A truck's suspension WILL squat under load, and may cause loads to become unstable. Also, this effectively changes the "bed height" of the truck, so the liftgate may not function properly on an elevated surface and may bind and damage the liftgate. Additionally, if the <u>ENTIRE liftgate platform</u> is not supported by the elevated surface, this partially supported condition WILL create unintended loads on the liftgate components and MAY LEAD TO A SUDDEN LIFTGATE FAILURE.
- 9. DO NOT OVERLOAD THE LIFTGATE. Each liftgate has a specific maximum capacity for lifting and lowering. The standard maximum rated capacity of the TT15 series liftgates differs with each model as follows:

TT15-1500 lbs. Maximum Load

<u>WARNING note</u>: Special options can lower the maximum rated capacities below those shown above. Be certain you know what the maximum rated capacity is for your particular liftgate.

- 10. NEVER off-center the load on the platform, from side to side or away from truck as this may overload the liftgate. The center of weight of the load should NEVER be placed beyond the center of the platform load surface, away from truck. Loads should be placed close to platform edge nearest truck. See figure 1.
- 11. NEVER allow any part of the load to extend beyond the edges of the platform's flat load surface. Overhanging objects increase the risks of tipping loads due to unstable loading or snagging these objects on surroundings and THESE OBJECTS COULD ALSO STRIKE OR CRUSH OPERATORS OR BYSTANDERS.
- 12. NEVER step on or place loads on, the ramp portion of any liftgate platform (includes all ramp styles), unless the platform is lowered completely to the ground and the entire platform and ramp are supported by the ground.
- 13. NEVER lift or lower unstable loads.
- 14. NEVER operate liftgate if platform load surface is slippery.
- 15. Make certain the areas above and below the liftgate platform and other moving liftgate parts, are clear before, and at all times during, operation of the liftgate. Do NOT allow anyone to stand around the platform where a falling load could land on them.
- 16. Load and unload the platform from the rear and not from the side of the platform.
- 17. Never operate lift trucks on or over any part of the platform.
- 18. Follow all sections in this manual with "Maintenance" in the title refer to "Table of Contents" on Page 2.

(Warnings continued on following pages)

- 19. NEVER move vehicle unless platform is properly stowed and power is off. Locking cable curbside pin must have cotter pin installed before transit. An open liftgate on a moving vehicle poses a serious traffic hazard.
- 20. ALWAYS stow liftgate in transit position when not in use. Liftgates left in their open positions, may create hazards for people and vehicles passing nearby.
- 21. Take care to retain cargo during transit. Liftgates are not designed to retain objects on the truck. Improperly retained objects may fall from the vehicle and pose serious traffic hazards and larger objects could shift and damage the liftgate or truck
- 22. Any time the vehicle is washed, this liftgate MUST be inspected to MAKE SURE all parts are properly lubricated and have the appropriate protectants. Failure to replace lubricants and protectants after washing the vehicle, may lead to improper operation of the liftgate, accelerated corrosion, and possible component failure.

An improperly positioned load can overload the liftgate and result in sudden liftgate failure and/ or increased risks to personnel of being hit or crushed by loads. **IMPROPERLY POSITIONED LOADS MAY RESULT IN SERIOUS PERSONAL INJURY AND/OR DEATH.** Always position loads properly on the liftgate platform. Follow information below on how to position loads properly.

POSITION LOADS PROPERLY ON PLATFORM

NEVER off-center the load on the platform, from side to side or away from truck as this may overload the liftgate. The center of weight of the load should NEVER be placed beyond the center of the platform load surface, away from truck. Loads should be placed close to the platform edge nearest truck. If a load is not uniformly distributed, then the heaviest portion should be closest to the edge of the platform nearest the truck. NEVER allow any part of the load to extend beyond the edges of the platform's flat load surface. NEVER allow any part of the load to extend over or on, the tapered ramp portion of the platform unless the platform is lowered completely to the ground and the ramp is supported by the ground.





DO NOT OVERHEAT THE HYDRAULIC PUMP

Exceeding the duty cycle of the hydraulic pump, can overheat many components, including the gear pump, the hydraulic motor, the motor start solenoid, valve coils, etc., and significantly shorten the expected life of these components. In extreme cases, immediate damage to the pump or related components may occur. Refer to the Thermal data below.

THERMAL DATA: To avoid overheating the motor do not operate this unit for more than 5 cycles/ 10 minutes with the maximum load. The motor then must be allowed to completely cool down to ambient temperature before cycling the lift again. This unit also has a 10% duty cycle, which means the liftgate can be cycled no more than 2 cycles/10 minutes constantly with the maximum load.

IMPROPER OPERATION OF THIS LIFTGATE MAY RESULT IN SERIOUS PERSONAL INJURY AND/OR DEATH. DO NOT operate this liftgate unless you have been properly instructed and have read and understood the Owner's Manual and all of its warnings, operating instructions and all decals.

OPERATING INSTRUCTIONS

1. UNLATCH AND UNFOLD

- A. Remove hairpin from curbside lock pin.
- B. Raise liftgate completely by pushing Switch to UP position until lock pins are Fully raised off the locking tab slots.





- C. Disengage lock pins by pulling outward on locking cable with one hand while holding platform upright with the other hand. With cable pulled, partially unfold platform with one hand, enough to clear locking tab slots.
- D. Release cable and unfold platform to the horizontal position using both hands.

- 2. RAISE OR LOWER
 - E. Use toggle switch or other supplied control to raise or lower liftgate.



- 3. STORE FOR TRANSIT
 - F. Push switch to UP position until Liftgate is fully raised.
 - G. Fold platform manually to the vertical position using both hands, until both lock pins engage securely in the locking tab slots.
 - H. Slide safety hairpin through hole in curbside lock pin and outside of curbside locking tab, to secure liftgate for transit.





IMPROPER MAINTENANCE OF THIS LIFTGATE MAY RESULT IN SERIOUS PERSONAL

INJURY AND/OR DEATH. Never use a liftgate, that has not been properly maintained. Follow all maintenance outlined in this manual, beginning with "Maintenance Guide" thru and including "Decal Maintenance - Inspection and Location of Decals".

MAINTENANCE GUIDE

The following inspection and maintenance operations should be performed at the recommended intervals or anytime the liftgate shows signs of abuse, and improper or abnormal operation.

MONTHLY INSPECTION AND MAINTENANCE

Operate the liftgate throughout its entire operational cycle and check the following:

- 1. Check that there are no unusual noises or vibrations.
- 2. Check that the platform is level when raised to bed height.
- 3. Check for apparent damage to the liftgate such as bent or distorted members, any cracked welds, etc., which may have resulted from overloading or abuse.
- 4. Check for any excessive wear in the following pivot areas (Note: For bushed pivots, if the gap between pin and bushing exceeds 1/32 of an inch, the bushing should be replaced. For pivots without bushings, replace worn components if gap between pin and pivot exceeds 1/32 of an inch. Refer to parts breakdowns in this manual):
 - A. Platform hinge pins, pivot plates, pins and bushings.
 - B. All cylinder pins and bushings.
 - C. All pins joining liftarm or idler arms to frame or pivot support.
 - D. Stow pins.
- 5. Check that ALL pins, bolts, hardware, etc. are in place and retained by their proper retainers. The lift arm and the idler arm pins are secured by spring pins. The street side platform pivot pin (adjusting bracket) and the curb side pin weld are bolted to the pivot supports with 3/8 bolts.
- 6. Check support cable for excessive wear and check that the locknuts on either end of the support cable are secure and pulling the cable tight between the pivot supports.
- 7. Check that all protective covers and guards are properly in place and secured.
- 8. Check finish of steel parts, if in poor condition, then repair finish if possible. Any rusted parts should be replaced.
- 9. Check condition of non-painted parts, replace if corrosion exists. Eck from Vannay.com should be used to prevent corrosion between dissimilar metals. Do not use Never Seez or similar anti-seize products which contain abrasives that may harm the bushings.
- 10. Check for oil leaks in these areas:
 - A. Lift cylinders
 - B. Hydraulic hoses replace if they show signs of wear or cracking.
 - C. Hydraulic fittings tighten or replace as may be required to stop leakage.
- 11. Check that all wiring and battery cable connections are tight and free of corrosion.

12. Check the oil level in the hydraulic reservoir. Release the safety latches and lower the platform to the ground. The oil should be within 1/2 inch from the top of the reservoir. See chart below for oil applications.

HYDF	HYDRAULIC FLUID CHART			
Temperature Range	Acceptable Fluids			
-45° F to 155° F	Mobil Univis HVI-26			
0° F to 140° F	Dexron VI (or Dexron III) Mobil 1 Synthetic ATF Shell Spirax S6 ATF X			
-55° F to 100° F	AeroShell Fluid 41 Mobil Aero HF Mobil Univis HVI-13 MIL-PRF-5606J			

13. Lubrication of the TT series liftgate should be as follows for all user conditions:

Area of Tailgate	Type of Lubrication	Frequency
Extension Pivot	SAE 10 to SAE 20 oil	50 cycles
Pump Oil Change	See Chart Above	Yearly

NOTE: The pivot points on the TT have special bushings which do not require lubrication.

14. Check the pump relief pressure and also the motor amperage at this pressure. These values should be as follows: Model Max Amp Draw Relief Pressure (psi)

Model	Max Amp Draw	Relief Pressure (ps
TT15	165	2300

- 15. Torsion Bar Adjustment:
 - A. Place platform in the stowed (vertical) position.
 - B. Turn the adjustment bracket nut(A) clockwise to relieve tension on 3/8" diameter bolt (B) and remove it from the bracket.
 - C. To increase tension, rotate the bracket counterclockwise until desired tension is reached. Line up the hole in the bracket to a hole in the pivot support and replace bolt (B).



SEMI-ANNUAL INSPECTION

- 1. Perform the procedures outlined in the "Monthly Inspection and Maintenance."
- 2. Repaint original painted components as necessary to prevent rust and corrosion from reducing structural integrity of original components.
- 3. Inspect pump motor by:
 - A. Disconnecting battery cable
 - B. Remove motor end cover
 - C. Examine the armature brushes for wear. (Brushes should be replaced if they are less than 1/8" long.)
 - D. Clean all residue out from inside of the motor housing.
 - E. Apply several drops of light weight machine oil to the armature shaft bearing in the motor cover end and reassemble the motor end cover.
- 4. If the hydraulic oil in the reservoir is dirty:
 - A. Lower the platform completely to the ground.
 - B. Drain the oil from the hydraulic system and flush the entire system.
 - C. Remove reservoir from pump and clean suction line filter. Also, clean out any contaminants from reservoir. Remount reservoir when completed.
 - D. Replace the oil as outlined in Section 12 under Monthly Inspection and Maintenance.



ACCESSING SPARE TIRE JACK

- 1. Lower gate to ground
- 2. Remove license plate. It is attached by two #12 screws.
- 3. Remove housing cover. It is attached by two .25 screws.
- 4. Pry out plug.

NOTE: If towing trailer, you may not be able to access this area.

DECAL MAINTENANCE - INSPECTION AND LOCATION OF DECALS

IMPROPER OPERATION OF THIS LIFTGATE MAY RESULT IN SERIOUS PERSONAL

INJURY AND/OR DEATH. Liftgate decals provide important information, which is vital for proper and safe operation of the liftgate. Replace any decals which are missing or which are not fully legible.

DO NOT operate liftgate unless all decals are legible and are properly located.

Part Name Part Number Item Warning Decal-Off Center 4671050 1 PTO Decal 2 4650140 Fast Idle Decal 2 4650150 Danger Decal-No Riding 3 4609 4 **Operating Decal** 4650870 Capacity Decal-1000# 5 4650050 Capacity Decal-1250# 5 4650060 5 Capacity Decal-1500# 4650070 Warning Decal 6 4681 7 Caution Decal-Working Area 4650770 8 Reflector (2) 5705 **Thieman Nameplate** 9 4650801 Hazard Marking Tape-Pivot 10 5760-002 Hazard Marking Tape-Frame 11 5760-003 Wiring Decal (Back of Cover) 12 4612 Warning Decal-High Pressure 4620 13





PUMP & CYLINDER ASSEMBLY

Item	Part Number	Description	Qty./Model
1	4400871	Pump Asm-Items 2-5	1
2	4423520	Motor 8111	1
3	4420409	Breather	1
4	4468	Solenoid	1
5	4918	.38M25F Reducer	1
6	4293	Cylinder Asm	2
7	4932-001	Tee MJ-MJ-MAORB	1
8	4350	Battery Lug	1
9	4300030	Battery Cable #2 x 25'	1
10	4951-007	Hose 41.00	2
11	4921-011	Tube 57.00	2
12	4933-001	Elbow BT-MAORB	2
13	5701260	Cable Retainer	12
14	4931-002	Restrictor Elbow MJ-MAORB	2
15	5702371	Spring Pin	4
16	5061	Pin	2
17	5504-001	Bushing	4
18	5781008	Retaining Ring	2
19	5059	Pin	2
20	8180122	.38 x 1 Screw	2
21	8106-010	.38 Internal Tooth Lockwasher	2
22	4318-001	Battery Cable #2 x 2'	1
23	31297	Clevis Weld	2
24	8108-005	.38 x .38 Set Screw	2
25	4220240	Nylon Insert	2
26	4445	Valve Asm	1
27	4452	Valve Coil	1
28	4319-002	Heat Shrink	1
29	4301770	Circuit Breaker	1
30	4968-001	Tee BT-BT25M	1



TT15 - UNDERCARRIAGE FOR PLATFORMS WITH NO TORSION ASSIST

	Deut Namela au	Description	Platform Width			
Item	Part Number	Description	49	53	56	60
1	21629 001	Frama Wold For All Other Platforms				
	31638-002	Frame Weld – For All Other Platforms	1	1		
	31638-003	Frame Weld – For All Other Platforms			1	
	31638-004	Frame Weld – For All Other Platforms				1
	31638-005	Frame Weld – 2PC, 26" Deep Steel Platform Only	1			'
	31638-006	Frame Weld – 2PC, 26" Deep Steel Platform Only		1		
1	31638-007	Frame Weld – 2PC, 26" Deep Steel Platform Only			1	
1	31638-008	Frame Weld – 2PC, 26" Deep Steel Platform Only				1
2	31354-001	Brace Weld		1		
2	31354-002	Brace Weld			1	
2	31354-003	Brace Weld				1
2	31354-006	Brace Weld	1			
3	31635-001	Bumper Weld	2			
3	31635-002	Bumper Weld		2		
3	31635-003	Bumper Weld			2	
3	31635-004	Bumper Weld				2
4	31356-001	Lift Arm Asm. – LH, Incl. Item 7	1	1	1	1
5	31356-002	Lift Arm Asm. – RH, Incl. Item 7	1	1	1	1
6	31302	Idler Arm Asm., Incl. Item 7	2	2	2	2
7	5504-001	Bushing – Lift Arms and Idler Arms	10	10	10	10
8	31301-002	Pivot Support Weld LH	1	1	1	1
9	31300-002	Pivot Support Weld RH	1	1	1	1
	2/2/9	Camera Cutout Cover Plate				
	8120386	Flatwasher .25	2	2	2	2
12	0102 000	Nulon Incort Locknut 25	4	4	4	4
10	23040-002	Frame Brace Vertical Long	2	2	2	2
14	23049-002	Frame Brace – Horizontal	2	2	2	2
16	23049-003	Frame Brace – Vertical Short	2	2	2	2
17	27262-002	Post Cover BH	1	1	1	1
18	27280	Cover – Camera Cutout	1	1	1	1
19	5793010	Screw 25 x 62	3	3	3	3
20	31446	Togale Switch Asm.	1	1	1	1
21	8109-012	Screw .25 x .75	2	2	2	2
22	8111-005	Screw #10 x .75	2	2	2	2
23	5702230	Cable Retainer	1	1	1	1
24	3801008	Latch Cable	1	1	1	1
25	5700022	Hairpin	1	1	1	1
26	5701200	Grommet	2	2	2	2
27	5059	Pin – Arms to Frame Weld	4	4	4	4
28	5060	Pin – Arms to Pivot Support Weld	4	4	4	4
29	5702371	Spring Pin .25 x 1.50	8	8	8	8
30	8120388	Flatwasher .38	10	10	10	10
31	8120382	Lockwasher .38	2	2	2	2
32	8100-010	Screw .50 x 1.25	6	6	6	6
33	3048	Pivot lube	2	2	2	2
34	5708-004	Spring Pin	2	2	2	2
35	31281	Pin Weld LH – Pivot Support Weld to Platform	1	1	1	1
27	01202			2	2	2
20	5702270	Plactic Square Nut	2	2	2	2
30	5702280	Sorow	2	2	2	2
40	4300550	License Plate Light	2	2	2	2
41	8104-010	Screw - 31 x 1 00	4	4	4	4
42	9413447	Locknut .31	8	8	8	8
43	8104-006	Screw .31 x 1.00	4	4	4	4
44	8120384	Lockwasher .50	6	6	6	6
45	8120396	Flatwasher .50	6	6	6	6
46	8109-019	Screw .25 x .75	4	4	4	4
47	27262-001	Post Cover LH	1	1	1	1
48	8107-007	Flatwasher #10	2	2	2	2



STEEL DECKPLATE PLATFORMS WITH NO TORSION ASSIST

Itom	Part Number	Description		Platform Width			
item	Fait Number	Description	49	53	56	60	
1	3435-001	Platform Weld - 1 PC. 26" Deep, Incl. Item 2		1			
1	3435-002	Platform Weld - 1 PC. 26" Deep, Incl. Item 2			1		
1	3435-003	Platform Weld - 1 PC. 26" Deep, Incl. Item 2				1	
1	3435-004	Platform Weld - 1 PC. 26" Deep, Incl. Item 2	1				
1	3440-004	Platform Weld - 2PC. 26" Deep, Incl. Items 2,3,4,5		1			
1	3440-005	Platform Weld - 2PC. 26" Deep, Incl. Items 2,3,4,5			1		
1	3440-006	Platform Weld - 2PC. 26" Deep, Incl. Items 2,3,4,5				1	
1	3440-007	Platform Weld - 2PC. 26" Deep, Incl. Items 2,3,4,5	1				
2	5504-011	Bushing - Platforms	2	2	2	2	
3	5056	Hinge Pin	2	2	2	2	
4	8107-011	Flatwasher .62	2	2	2	2	
5	5781017	Retaining Ring	4	4	4	4	
6	31357-001	Locking Cable Asm.		1			
6	31357-002	Locking Cable Asm.			1		
6	31357-003	Locking Cable Asm.				1	
6	31357-006	Locking Cable Asm.	1				
7	5101160	Spring	2	2	2	2	
8	8120396	Flatwasher .50	4	4	4	4	
9	8121222	Cotter Pin	2	2	2	2	



ALUMINUM EXTRUSION PLATFORMS WITH NO TORSION ASSIST

Itom	Part Number	Description	Platform Width			
nem	Fait Number	Description	49	53	56	60
1	3430-004	Platform Weld - 1 PC. 26" Deep, Incl. Item 2		1		
1	3430-005	Platform Weld - 1 PC. 26" Deep, Incl. Item 2			1	
1	3430-006	Platform Weld - 1 PC. 26" Deep, Incl. Item 2				1
1	3430-014	Platform Weld - 1 PC. 26" Deep, Incl. Item 2	1			
1	3430-001	Platform Weld - 1 PC. 32" Deep. Incl. Item 2		1		
1	3430-002	Platform Weld - 1 PC. 32" Deep, Incl. Item 2			1	
1	3430-003	Platform Weld - 1 PC. 32" Deep, Incl. Item 2				1
1	3430-013	Platform Weld - 1 PC. 32" Deep. Incl. Item 2	1			
1	3429-004	Platform Weld - 2 PC. 26" Deep. Incl. Items 2,3,4,5		1		
1	3429-005	Platform Weld - 2 PC. 26" Deep, Incl. Items 2,3,4,5			1	
1	3429-006	Platform Weld - 2 PC. 26" Deep. Incl. Items 2,3,4,5				1
1	3429-022	Platform Weld - 2 PC. 26" Deep, Incl. Items 2,3,4,5	1			
1	3429-010	Platform Weld - 2 PC. 32" Deep, Incl. Items 2,3,4,5		1		
1	3429-011	Platform Weld - 2 PC. 32" Deep, Incl. Items 2,3,4,5			1	
1	3429-012	Platform Weld - 2 PC. 32" Deep. Incl. Items 2,3,4,5				1
1	3429-023	Platform Weld - 2 PC. 32" Deep, Incl. Items 2,3,4,5	1			
2	5504-011	Bushing - Platforms	4	4	4	4
3	5781017	Retaining Ring	4	4	4	4
4	5056	Hinge Pin	2	2	2	2
5	8107-011	Flatwasher .62	2	2	2	2
6	31357-001	Locking Cable Asm.		1		
6	31357-002	Locking Cable Asm.			1	
6	31357-003	Locking Cable Asm.				1
6	31357-006	Locking Cable Asm.				
7	5101160	Spring	2	2	2	2
8	8120396	Flatwasher .50	4	4	4	4
9	8121222	Cotter Pin	2	2	2	2



TT15 - STEEL 42.00" DEEP PLATFORMS WITH TORSION ASSIST

Itelf Part Number Description 49 53 56 60 1 31638-002 Frame Weld 1<	ltore	Deut Number	Description	Platform Width			
1 31638-002 Frame Weld 1 1 1 1 31638-002 Frame Weld 1 1 1 1 31638-003 Frame Weld 1 1 1 2 3441-001 Platform Weld - 2PC. 42" Deep, Incl. Items 11,46,47 1 1 2 3441-003 Platform Weld - 2PC. 42" Deep, Incl. Items 11,46,47 1 1 2 3441-003 Platform Weld - 2PC. 42" Deep, Incl. Items 11,46,47 1 1 3 31354-001 Brace Weld 1 1 1 3 31354-003 Brace Weld 2 2 2 4 31635-001 Bumper Weld 2 2 1 31635-003 Bumper Weld 2 2 2 3801-003 Support Cable 1 1 1 5 3801-003 Support Cable 1 1 6 5101-010 Torsion Bar 1 1 1 7 31357-002 Locking Cable </td <td>Item</td> <td>Part Number</td> <td>Description</td> <td>49</td> <td>53</td> <td>56</td> <td>60</td>	Item	Part Number	Description	49	53	56	60
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7 31357-005 Locking Cable 1 8 31356-001 Lift Arm Asm. – LH, Incl. Item 11 1 1 1 1 9 31356-002 Lift Arm Asm. – I.H., Incl. Item 11 1 1 1 1 1 10 31302 Idler Arm Asm. , Incl. Item 11 1 1 1 1 1 1 11 5504-001 Bushing – Lift Arms, Idler Arms, and Platform 14 14 14 14 14 12 31482 HD Pivot Support Weld RH 1 1 1 1 1 14 27279 Camera Cutout Cover Plate 1 1 1 1 1 15 8109-012 Screw .25 x .75 2		31357-002				I	- 1
7 51336-001 Lift Arm Asm LH, Incl. Item 11 1 </td <td>7</td> <td>31357-003</td> <td></td> <td>1</td> <td></td> <td></td> <td>1</td>	7	31357-003		1			1
3 31356-002 Lift Arm Asm EH, Linc. Item 11 1 </td <td>8</td> <td>31356-001</td> <td>Lift $Arm Asm - I H$ Incl. Item 11</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td>	8	31356-001	Lift $Arm Asm - I H$ Incl. Item 11	1	1	1	1
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11 5504-001 Bushing – Lift Arms, Idler Arms, and Platform 14 14 14 14 14 14 14 14 14 14 14 14 14 11 1 <th1< td=""><td>10</td><td>31302</td><td>Idler Arm Asm. Incl. Item 11</td><td>2</td><td>2</td><td>2</td><td>2</td></th1<>	10	31302	Idler Arm Asm. Incl. Item 11	2	2	2	2
1231483HD Pivot Support Weld LH111111331482HD Pivot Support Weld RH1111111427279Camera Cutout Cover Plate111111158109-012Screw .25 x.7522222168120386Flatwasher .2522222175794-001Rubber Washer44441823049-002Frame Brace - Vertical Long222222023049-003Frame Brace - Vertical Short222222131298-002Post Cover RH111112227280Cover - Camera Cutout11111238449646Screw .25 x. 62333332431446Toggle Switch Asm11111258103-022Nylon Insert Locknut .2522222268111-005Screw #10 x.7522222255702230Cable Retainer11111295700224Hairpin1111129570230Gable Retainer22222315059Pin – Arms to Frame Weld4444 <td>11</td> <td>5504-001</td> <td>Bushing – Lift Arms, Idler Arms, and Platform</td> <td>14</td> <td>14</td> <td>14</td> <td>14</td>	11	5504-001	Bushing – Lift Arms, Idler Arms, and Platform	14	14	14	14
13 31482 HD Pivot Support Weld RH 1 <t< td=""><td>12</td><td>31483</td><td>HD Pivot Support Weld LH</td><td>1</td><td>1</td><td>1</td><td>1</td></t<>	12	31483	HD Pivot Support Weld LH	1	1	1	1
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158109-012Screw .25 x .7522222168120386Flatwasher .2522222175794-001Rubber Washer44441823049-002Frame Brace - Vertical Long222221923049-003Frame Brace - Vertical Short222222023049-001Frame Brace - Vertical Short222222131298-002Post Cover RH111112227280Cover - Camera Cutout11111238449646Screw .25 x .6233332431446Toggle Switch Asm11111258103-022Nylon Insert Locknut .252222268111-005Screw #10 x .7522222275702230Cable Retainer11111283801008Latch Cable1111129570022Hairpin11111305702371Spring Pin .25 x 1.508888348120388Flatwasher .3810101010358120382Lockwasher .3822222368100-010Screw .38 x .75 <td>14</td> <td>27279</td> <td>Camera Cutout Cover Plate</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td>	14	27279	Camera Cutout Cover Plate	1	1	1	1
16 8120386 Flatwasher .25 2 2 2 2 2 17 5794-001 Rubber Washer 4 4 4 4 18 23049-002 Frame Brace – Vertical Long 2 2 2 2 19 23049-003 Frame Brace – Horizontal 2 2 2 2 2 20 23049-001 Frame Brace – Vertical Short 2 2 2 2 2 21 31298-002 Post Cover RH 1 1 1 1 1 23 8449646 Screw .25 x. 62 3 3 3 3 3 24 31446 Toggle Switch Asm 1 1 1 1 1 25 8103-022 Nylon Insert Locknut .25 2	15	8109-012	Screw .25 x .75	2	2	2	2
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18 23049-002 Frame Brace – Vertical Long 2 2 2 2 19 23049-003 Frame Brace – Vertical Short 2 2 2 2 20 23049-001 Frame Brace – Vertical Short 2 2 2 2 21 31298-002 Post Cover RH 1 1 1 1 1 22 27280 Cover – Camera Cutout 1 1 1 1 1 23 8449646 Screw .25 x .62 3 3 3 3 3 24 31446 Toggle Switch Asm 1 1 1 1 1 25 8103-022 Nylon Insert Locknut .25 2 2 2 2 26 8111-005 Screw #10 x .75 2 2 2 2 27 570230 Cable Retainer 1 1 1 1 1 28 3801008 Latch Cable 1 1 1 1 1 1 29 570022 Hairpin 1 1 <	17	5794-001	Rubber Washer	4	4	4	4
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21 31295-002 Post Cover - Camera Cutout 1 1 1 1 1 22 27280 Cover - Camera Cutout 1 1 1 1 1 1 23 8449646 Screw .25 x .62 3 3 3 3 3 24 31446 Toggle Switch Asm 1 1 1 1 1 1 25 8103-022 Nylon Insert Locknut .25 2 2 2 2 2 2 26 8111-005 Screw #10 x .75 2 <t< td=""><td>20</td><td>23049-001</td><td>Frame Brace – Vertical Short</td><td>2</td><td>2</td><td>2</td><td>2</td></t<>	20	23049-001	Frame Brace – Vertical Short	2	2	2	2
22 27,200 Cover = Gamera Outout 1	21	27280	Cover – Camera Cutout	1	1	1	1
24 31446 Toggle Switch Asm 1 1 1 1 1 1 25 8103-022 Nylon Insert Locknut .25 2 2 2 2 2 26 8111-005 Screw #10 x .75 2 2 2 2 2 27 5702230 Cable Retainer 1 1 1 1 1 28 3801008 Latch Cable 1 1 1 1 1 29 570022 Hairpin 1 1 1 1 1 1 30 5701200 Grommet 2 2 2 2 2 31 5059 Pin – Arms to Frame Weld 4 4 4 32 5060 Pin – Arms to Pivot Support Weld 4 4 4 33 5702371 Spring Pin .25 x 1.50 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 35 8120382 Lockwasher .38 x .75 2 2 2 2	23	8449646	Screw 25 x 62	3	3	3	3
25 8103-022 Nylon Insert Locknut .25 2 2 2 2 2 26 8111-005 Screw #10 x .75 2 2 2 2 2 2 27 5702230 Cable Retainer 1 1 1 1 1 1 1 28 3801008 Latch Cable 1 1 1 1 1 1 1 29 570022 Hairpin 1 1 1 1 1 1 1 30 5701200 Grommet 2 </td <td>24</td> <td>31446</td> <td>Toggle Switch Asm</td> <td>1</td> <td>1</td> <td>1</td> <td>1</td>	24	31446	Toggle Switch Asm	1	1	1	1
26 8111-005 Screw #10 x .75 2 2 2 2 27 5702230 Cable Retainer 1 1 1 1 1 28 3801008 Latch Cable 1 1 1 1 1 1 29 570022 Hairpin 1 1 1 1 1 1 30 5701200 Grommet 2 2 2 2 2 2 31 5059 Pin – Arms to Frame Weld 4 4 4 4 32 5060 Pin – Arms to Pivot Support Weld 4 4 4 33 5702371 Spring Pin .25 x 1.50 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 <t< td=""><td>25</td><td>8103-022</td><td>Nvlon Insert Locknut .25</td><td>2</td><td>2</td><td>2</td><td>2</td></t<>	25	8103-022	Nvlon Insert Locknut .25	2	2	2	2
27 5702230 Cable Retainer 1 1 1 1 1 28 3801008 Latch Cable 1 1 1 1 1 29 5700022 Hairpin 1 1 1 1 1 1 30 5701200 Grommet 2 2 2 2 2 31 5059 Pin – Arms to Frame Weld 4 4 4 4 32 5060 Pin – Arms to Pivot Support Weld 4 4 4 4 33 5702371 Spring Pin .25 x 1.50 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 <td>26</td> <td>8111-005</td> <td>Screw #10 x .75</td> <td>2</td> <td>2</td> <td>2</td> <td>2</td>	26	8111-005	Screw #10 x .75	2	2	2	2
28 3801008 Latch Cable 1 1 1 1 1 29 5700022 Hairpin 1 1 1 1 1 1 30 5701200 Grommet 2 2 2 2 2 31 5059 Pin – Arms to Frame Weld 4 4 4 4 32 5060 Pin – Arms to Pivot Support Weld 4 4 4 4 33 5702371 Spring Pin .25 x 1.50 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1 1	27	5702230	Cable Retainer	1	1	1	1
29 5700022 Hairpin 1 1 1 1 1 1 30 5701200 Grommet 2 2 2 2 2 31 5059 Pin – Arms to Frame Weld 4 4 4 4 32 5060 Pin – Arms to Pivot Support Weld 4 4 4 4 33 5702371 Spring Pin .25 x 1.50 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1	28	3801008	Latch Cable	1	1	1	1
30 5701200 Grommet 2 2 2 2 31 5059 Pin – Arms to Frame Weld 4 4 4 4 32 5060 Pin – Arms to Pivot Support Weld 4 4 4 4 33 5702371 Spring Pin .25 x 1.50 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1	29	5700022	Hairpin	1	1	1	1
31 5059 Pin – Arms to Frame Weld 4 4 4 4 32 5060 Pin – Arms to Pivot Support Weld 4 4 4 4 33 5702371 Spring Pin .25 x 1.50 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1	30	5701200	Grommet	2	2	2	2
32 5060 Pin – Arms to Pivot Support Weld 4 4 4 4 33 5702371 Spring Pin .25 x 1.50 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1	31	5059	Pin – Arms to Frame Weld	4	4	4	4
33 5702371 Spring Pin.25 x 1.50 8 8 8 8 8 34 8120388 Flatwasher .38 10 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1	32	5060	Pin – Arms to Pivot Support Weld		4	4	4
34 0120300 Flatwasher .30 10 10 10 10 10 35 8120382 Lockwasher .38 2 2 2 2 2 36 8100-010 Screw .50 x 1.25 6 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1	33	5/023/1	Spring Pin .25 x 1.50	8	8	8	8
36 8100-010 Screw .50 x 1.25 6 6 6 6 37 8180120 Screw .38 x .75 2 2 2 2 2 38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1	25	0120300 8120300	Fialwasher 38		1U 2	01 0	01 0
37 8180120 Screw .38 x .75 2 2 2 2 2 2 2 2 2 1 <th1< th=""></th1<>	36	8100-010	Screw 50 x 1 25	6	6	6	6
38 31283 Pin Weld - RH Pivot Support Weld to Platform 1 1 1 1	37	8180120	Screw 38 x 75	2	2	2	2
	38	31283	Pin Weld - RH Pivot Support Weld to Platform	1	1	1	1

TT15 - STEEL 42.00" DEEP PLATFORMS WITH TORSION ASSIST - CONTINUED

Itom Part Number		Description	Platform Width			
	Fait Number	Description	49	53	56	60
39	8103-022	Locknut .25	2	2	2	2
40	31003	Adjustment Bracket – LH Pivot Support Weld to Platform	1	1	1	1
41	5702270	Plastic Square Nut	2	2	2	2
42	5702280	Screw	2	2	2	2
43	4300550	License Plate Light	2	2	2	2
44	8104-010	Screw31 x 1.00	4	4	4	4
45	9413447	Locknut .31	8	8	8	8
46	5056	Hinge Pin	2	2	2	2
47	8107-011	Flatwasher .62	2	2	2	2
48	5101160	Spring	2	2	2	2
49	8120396	Flatwasher .50	10	10	10	10
50	8121222	Cotter Pin	2	2	2	2
51	8107-007	Flatwasher #10	2	2	2	2
52	8120384	Lockwasher .50	6	6	6	6
53	5781017	Retaining Ring	4	4	4	4
54	8180122	Screw .38 x 1.00	4	4	4	4
55	27262-001	Post Cover LH	1	1	1	1
56	8104-006	Screw .31x1.00 Hex Head	4	4	4	4
57	8109-019	Screw .25 x .75	4	4	4	4



TT15 - ALUMINUM 44.00" DEEP PLATFORMS WITH TORSION ASSIST

ltore	Deut Number	Description		Platforr	n Width	
Item	Part Number	Description	49	53	56	60
1	31638-001	Frame Weld	1			
1	31638-002	Frame Weld		1		
1	31638-003	Frame Weld			1	
1	31638-004	Frame Weld				1
2	3443-004	Platform Weld – 2PC. 44" Deep, Incl. Items 54,46,47		1		
2	3443-005	Platform Weld – 2PC. 44" Deep, Incl. Items 54,46,47			1	
2	3443-006	Platform Weld – 2PC. 44" Deep, Incl. Items 54,46,47				1
2	3443-008	Platform Weld – 2PC. 44" Deep, Incl. Items 54,46,47	1			
3	31354-001	Brace Weld		1		
3	31354-002	Brace Weld			1	
3	31354-003	Brace Weld				1
3	31354-006	Brace Weld	1			
4	31635-001	Bumper Weld	2			
4	31635-002	Bumper Weld		2		
4	31635-003	Bumper Weld			2	
4	31635-004	Bumper Weld				2
5	3801-001	Support Cable		1		
5	3801-002				I	4
5	3801-003	Support Cable	4			1
5	5107 002	Support Cable	1	4		
6	5107-003	Torsion Bar		1	1	
6	5107-004	Torsion Bar				1
6	5107-006	Torsion Bar	1			'
7	31357-001	Locking Cable	'	1		
7	31357-002	Locking Cable			1	
7	31357-003	Locking Cable				1
7	31357-006	Locking Cable	1			
8	31356-001	Lift Arm Asm. – LH, Incl. Item 11	1	1	1	1
9	31356-002	Lift Arm Asm. – RH, Incl. Item 11	1	1	1	1
10	31302	Idler Arm Asm. , Incl. Item 11	2	2	2	2
11	5504-001	Bushing – Lift Arms and Idler Arms	10	10	10	10
12	31483	HD Pivot Support Weld LH	1	1	1	1
13	31482	HD Pivot Support Weld RH	1	1	1	1
14	27279	Camera Cut-Out Cover Plate	1	1	1	1
15	8109-012	Screw .25-20 x .75	2	2	2	2
16	8120386	Flatwasher .25	2	2	2	2
17	5794-001	Rubber Washer	4	4	4	4
18	23049-002	Frame Brace – Vertical Long	2	2	2	2
19	23049-003	Frame Brace – Horizontal	2	2	2	2
20	23049-001	Frame Brace-Vertical Short	2	2	2	2
21	27262-002	Post Cover RH	1	1	1	1
22	27280	Cover – Camera Cutout				
23	31446	Screw .25 X .02 Toggle Switch Asm	1	1	1	1
24	8103-022	25-20 Nylon Insert Locknut	2	2	2	2
25	8111-005	Screw #10 x 75	2	2	2	2
27	5702230	Cable Betainer	1	1	1	1
28	3801008	Latch Cable	1	1	1	1
29	5700022	Hairpin	1	1	1	1
30	5701200	Grommet	2	2	2	2
31	5059	Pin – Arms to Frame Weld	4	4	4	4
32	5060	Pin – Arms to Pivot Support Weld	4	4	4	4
33	5702371	Spring Pin .25 x 1.50	8	8	8	8
34	8120388	Flatwasher .38	10	10	10	10
35	8120382	Lockwasher .38	2	2	2	2
36	8100-010	Screw .50 x 1.25	6	6	6	6
37	8180120	Screw .38 x .75	2	2	2	2

TT15 - ALUMINUM 44.00" DEEP PLATFORMS WITH TORSION ASSIST - CONTINUED

Itom	Port Number	Description	Platform Width				
nem	Fait Number	Description	49	53	56	60	
38	31283	Pin Weld - RH Pivot Support Weld to Platform	1	1	1	1	
39	8103-022	Locknut .25	2	2	2	2	
40	31003	Adjustment Bracket – LH Pivot Support Weld to Platform	1	1	1	1	
41	5702270	Plastic Square Nut	2	2	2	2	
42	5702280	Screw	2	2	2	2	
43	4300550	License Plate Light	2	2	2	2	
44	8104-010	Screw31 x 1.00	4	4	4	4	
45	9413447	Locknut .31	8	8	8	8	
46	5056	Hinge Pin	2	2	2	2	
47	8107-011	Flatwasher .62	2	2	2	2	
48	5101160	Spring	2	2	2	2	
49	8120396	Flatwasher .50	10	10	10	10	
50	8121222	Cotter Pin	2	2	2	2	
51	8107-007	Flatwasher #10	2	2	2	2	
52	8120384	Lockwasher .50	6	6	6	6	
53	5781017	Retaining Ring	4	4	4	4	
54	5504-012	Bushing	4	4	4	4	
55	8109-019	Screw .25 x 1.75	4	4	4	4	
56	31298-001	Post Cover LH	1	1	1	1	
57	8104-006	Screw .31 x 1.00 Hex Head	4	4	4	4	



TT15 – MOUNTING HARDWARE PARTS LIST

POST SUPPORTS - SEE FIGURE A

Item	Part Number	Description	Qty.
A1	31639-001	Post Support – LH (Multiple Pickup Models)	1
A2	31639-002	Post Support – RH (Multiple Pickup Models)	1
A3	31641-001	Post Support – LH (Service Body)	1
A4	31641-002	Post Support – RH (Service Body)	1
A5	31838-001	Post Support – LH (2019-Present Chevy Pickups)	1
A6	31838-002	Post Support – RH (2019-Present Chevy Pickups)	1
	1		1

BOLT-ON POST SUPPORT HDWE - SEE FIGURE B

Item	Part Number	Description	Qty.
B1 B2 B3	<u>3653</u> 8100-011 8120396 9414074	<u>Includes Items B1 Thru B3</u> Screw .50 x 1.75 Flatwasher .50 Locknut .50	4 8 4

MOUNTING FLANGE & HDWE - SEE FIGURE C

Item	Part Number	Description	Qty.
C1	27220 3654	Mounting Flange Includes Items C2 Thru C5	2
C2 C3 C4 C5	8180122 8120388 8120382 8120377	Screw .38 x 1.00 Flatwasher .38 Lockwasher .38 Nut .38	8 16 8 8

MTG. ANGLE AND HDWE – SEE FIGURE D

ltem	Part Number	Description	Qty.
D1	2043 <u>3655</u>	Mounting Angle Includes Items D2 Thru D4	2
D2	8180122	Screw .38 x 1.00	4
D3	8120388	Flatwasher .38	8
D4	9413534	Locknut .38	4

POST SUPPORT FILLER AND HDWE - SEE FIGURE E

Item	Part Number	Description	Qty.
E1	27207 3656	Post Support Filler Includes Item E2	2
E2	5793010	Screw .25 x .63	4



TT15 – MOUNTING HARDWARE PARTS LIST - CONTINUED

BACKER PLATES AND TRUCK FLOOR HDWE – SEE FIGURE F

Item	Part Number	Description	Qty.
F1	27219	Backer Plate	2
F2 F3	8108-017 8108-009	Carriage Bolt .38 x 1.50	3
F4	8108-018	Screw .38 x 4.00	2
F5 F6	8120388	Flatwasher .38 Fender Washer .38	19
F7	8103-036	Nylon Insert Locknut .38	11

POST SPACER PLATE AND STAKE POCKET HDWE – SEE FIGURE G

G127211Post Spacer Plate2G223124Spacer Plate (2007-2018 Chevy C/K)2	ltem	Part Number	Description	Qty.
3658 Includes Items G3 Thru G5 G3 8108-016 Screw .38 x 1.75 8 G4 8120388 Flatwasher .38 1	G1 G2 G3 G4	27211 23124 <u>3658</u> 8108-016 8120388	Post Spacer Plate Spacer Plate (2007-2018 Chevy C/K) Includes Items G3 Thru G5 Screw .38 x 1.75 Flatwasher .38	4 2 8 16

SPACER TUBE AND STAKE POCKET MTG. HDWE – SEE FIGURE H

Item	Part Number	Description	Qty.
H1 H2 H3 H4 H5	3074 27213 <u>3659</u> 8108-019 8120388 8103-036	Post Support Spacer Tube (2007-2018 Chevy C/K) Tube Spacer (2007-2018 Chevy C/K) <u>Includes Items H3 Thru H5</u> Screw .38 x 2.75 Flatwasher .38 Nylon Insert Locknut .38	2 2 10 20 10

MTG. PLATE AND STAKE POCKET MTG. HDWE - SEE FIGURE J

ltem	Part Number	Description	Qty.
J1	27304-001	Mounting Plate (2019 Chevy C/K) – LH (Shown)	1
J2	27304-002	Mounting Plate (2019 Chevy C/K) – RH	1
J3	31837	Mounting Shim Weld (2019 Chevy C/K 25/3500)	2
	<u>3660</u>	Includes Items J4 Thru J13	
J4	8271771	Screw .75 x 2.00	2
J5	9429664	Flatwasher .75	4
J6	8103-035	Nylon Insert Locknut .75	2
J7	8180122	Screw .38 x 1.00	2
J8	8120388	Flatwasher .38	6
J9	8103-036	Nylon Insert Locknut .38	6
J10	8108-016	Screw .38 x 1.75	4
J11	8100-014	Screw .50 x 1.50	2
J12	8120396	Flatwasher .50	2
J13	8414074	Locknut .50	2





Itom Port Number		Description	Platform Width			
nem	Fait Number	Description	49	53	56	60
1	31635-005	Bumper Weld	2			
1	31635-006	Bumper Weld		2		
1	31635-007	Bumper Weld			2	
1	31635-008	Bumper Weld				2
2	3642	Bumper Light Kit- includes items 3-9	1	1	1	1
3	5702270	Plastic Square Nut	2	2	2	2
4	5702280	Screw	2	2	2	2
5	43040	Light Harness	1	1	1	1
6	4379	Grommet	4	4	4	4
7	8107-007	Flatwasher#10	2	2	2	2
8	43062	Stop/Turn/Tail Lamp - LED	2	2	2	2
9	43080	Back-up Lamp - LED	2	2	2	2
10	8104-010	Screw31 x 1.00 Flat Head	4	4	4	4
11	8104-006	Screw31 x 1.00 Hex Head	4	4	4	4
12	9413447	Locknut .31	8	8	8	8
13	23049-001	Bumper Brace	2	2	2	2





ELECTRICAL PICTORIAL



TROUBLESHOOTING GUIDE TT15ET

Test Equipment: 1. 0-5000 psi pressure gauge

- 2. DC voltmeter/ohm meter
- 3. DC amp meter
- 4. standard mechanics tools

Note: Please refer to the electrical diagrams and hose connection drawings in the liftgate's owner's manual when troubleshooting. This guide is only for standard Thieman liftgates. Special liftgates with options other than those in the owner's manual will require special diagrams for troubleshooting. Read and understand this entire guide completely before doing any troubleshooting. Certain listed problems may be related to other problems listed so a comprehensive knowledge is required before proceeding.

1. Problem - Pump motor will not run in the raise mode		
Cause	Correction	
a. Tripped circuit breaker	Reset the circuit breaker located within 2ft of the liftgate supply battery(ies).	
b. Blown 20A fuse	Replace 20A fuse (s). Each control cord should have a 20A in-line fuse on the black	
a leases as hottom (apple	where it connects to the 2ga, battery cable at the motor start solehold.	
	cheuld be at least 12 5V, and this veltage should be seen on the beauty 2ge, bettery	
ground connection	soble, where it connects to the lorge terminal of the motor start colonaid. The	
ground connection	minimum voltage between the meter stud and ground is 10V at maximum	
	conditions with pump motor batteries and cables under max load. If the voltage is	
	dronning below 10V under max load, bad connections may be acting like resistors	
	and causing larger voltage drops than expected. Check voltage drops with system	
	under load at different locations between the liftgate and battery source, to locate	
	bad connections along the battery cable. Trace ground cable connections also to	
	locate improper connection(s) along the ground path. Make sure the ground cable is	
	installed going from the 5/16 tapped hole in the aluminum pump base marked GND	
	to the liftgate mounting plate (scrape paint to bare metal for good ground). The	
	ground cable from the batteries to the frame must be a heavy 2ga. cable that is	
	connected to bare metal on the frame. Replace any damaged cables and repair any	
	bad connections	
d. Defective or	If proper voltage is not present, load test batteries and replace any defective	
undercharged	batteries. The battery(ies) on the vehicle should be that which has a minimum	
battery(les)	180-amp reserve capacity.	
e. Detective or improperly	Check voltage on the black wire of the control cord hear the switch. If no voltage is	
wired raise switch	present the black wire from the motor start solehold is loose of broken and needs	
	with the switch in the "LIP" position. If no voltage is present, replace the switch	
f Defective or improperly	Check for voltage on the white wire at the motor start solenoid when the switch is	
wired solenoid start	activated "UP". If no voltage exists the white wire is loose or broken between the	
switch	switch and the motor start solenoid. Check that the purple ground wire on the start	
	solenoid is connected properly and there are no bad connections. If there is voltage	
	on the white wire and the coil does not energize or if there is no voltage on the motor	
	side of the solenoid or a large voltage drop present across the large terminals of the	
	motor start solenoid then replace the motor start solenoid.	
g. Defective pump motor	With the switch activated in the "UP" position and the motor start solenoid activated,	
	check for voltage (10V minimum) at the motor terminal. If proper voltage is present	
	and the motor is not running, double check the motor ground (see correction c.	
	above.). If the motor has proper voltage and good ground and does not run, replace	
	the motor.	

2. Problem – Liftgate will not raise or raises slowly with a load and the pump motor running. The raise speed of the TT15 from ground on a 45" bed height while empty at 70° F is approximately 8-9 seconds.

Cause	Correction
a. Low hydraulic fluid	Make sure the reservoir has the proper amount of fluid. The hydraulic fluid should be within ½" of the top of the reservoir with the liftgate in the lowered position. Fill with Dexron III automatic transmission fluid or other acceptable fluid (see Hydraulic Fluid Chart in "Maintenance Guide" section of this manual). Low fluid levels can introduce air, which will compress, especially when loaded and can make the liftgate feel "spongy". It can also make the gate raise at varying and alternating speeds (i.e.
	slower as the air is compressed, then suddenly quicker as the air expands in a repeating pattern).
b. Cold Weather	Refer to Hydraulic Fluid Chart in "Maintenance Guide" section of this manual, for alternative oils to use for cold weather conditions
c. Overload condition	The power unit on the TT15 is equipped with a lifting relief valve to prevent overloading of the liftgate while attempting to raise a load. See relief setting in "Maintenance Guide" section of this manual. Do NOT overload the liftgate.
d. Low voltage and/or bad ground	If the voltage reaching the motor drops below 10V under max. load conditions, this low voltage can cause the liftgate to slow. If voltages get low enough or ground is inadequate, the liftgate may not raise at all (see Problem 1) and will not be able to develop the rated relief pressure. Low voltages can cause motor start solenoids to overheat and internally weld the contacts closed, which can lead to motor overheating and pump failure. DO NOT run the liftgate under low voltage/and or bad ground conditions.
e. Improperly adjusted or defective main relief valve	See section "c" above for relief valve setting. Lower the gate completely to the ground to relieve all pressure from the hydraulic system and remove all loads from the platform. Plumb a pressure gauge into the high-pressure circuit of the liftgate (the high-pressure hoses connected to the port on the pump). Engage the "UP" switch until the liftgate is fully raised. Keep the "UP" switch engaged until the pump bypasses through the relief valve and note the pressure on the gauge at this time. If the rated relief pressure is not present during relief, adjust the high-pressure relief valve must be cleaned and/or replaced or the pump is defective. See part k below.
f. Lift cylinders are bypassing, liftgate is drifting down too quickly	If the liftgate will not raise with a load on the platform, or raises slowly or only partially when empty, one or both of the cylinders may be bypassing. Bypassing cylinder(s) will cause increased hydraulic drift in the liftgate. The TT15 liftgate's maximum allowable drift is .44 inch/hr. (the platform can lower .44 inch/hr). To check for bypassing cylinders, do the following: Lower the gate to the ground and remove the pump cover. Disconnect the low-pressure plastic return lines from the T-fitting in the reservoir. Drain any fluid from these return lines. Put the loose ends of the return lines in a drip pan. Press the "UP" switch until both cylinders are fully retracted. Press the "UP" switch for 15 to 20 seconds and watch for a steady stream of fluid coming out of one of the disconnected return lines. Replace or rebuild any cylinders with fluid coming out of the return line, as this indicates fluid bypassing the piston seals on the cylinder. Reconnect rebuilt or replaced cylinders and hoses as before.
g. Broken hydraulic line	Broken or punctured hydraulic lines and fittings must be replaced with care to avoid injury from high pressure oil streams.
h. Clogged or disconnected suction line	With the liftgate at the ground, disconnect the power unit and remove the reservoir. Check to see if the suction tube is clogged or has fallen out of the pump base. Clean the screen or reattach the suction tube as required.
i. Defective pump	If all else fails, the power unit MAY be defective. If the liftgate is older, the pump may be worn out and unable to pump fluid at pressure with the correct flow rate. Feel free to contact Thieman for further consultation.

3. Problem – Liftgate will not lower		
Cause	Correction	
a. Defective or improperly wired lower switch	Check voltage on the black wire of the control cord near the switch. If no voltage is present, the black wire from the motor start solenoid is loose or broken and needs repaired. If voltage is present, then check for voltage at the green wire on the switch with the switch in the "DOWN" position. If no voltage is present, replace the switch.	
b. Defective lowering solenoid coil or valve	With the "DOWN" switch engaged, check for voltage on the green wire on the lower solenoid valve coil terminal. If no voltage is present, the green wire from the "DOWN" switch is loose or broken and needs replaced. Check for proper ground at the purple wire on the lowering solenoid coil. Repair or replace ground as required. If there is voltage (minimum of 9.5 volts) and proper ground at the lowering coil, and the valve is not opening to allow the gate to lower, either the lower coil is bad or the entire lower coil/valve assembly is bad. To check to see if the coil is defective, remove the green and purple wires from the spade terminals on the lower coil and check the resistance between these spade terminals (3.6 - 4.4 Ohm is acceptable). Note: Low resistance can cause the 20-amp fuse to blow (see Problem 1, part b) and high resistance will lower the coils magnetic force and may not shift the valve. If proper resistance does not exist, replace the defective coil, otherwise replace the defective lower coil/valve assembly.	
c. Clogged or defective	Remove any obstruction in the hoses, fittings, and flow controls or replace any hose,	
hydraulic lines, fittings or	fitting or flow control which does not allow fluid to flow through freely.	
now controls		

4. Problem – Oil or foamy oil/air mixture flowing from reservoir breather		
Cause	Correction	
a. Air is present in the system	This can occur if air enters the system if the fluid level is low, see problem 2, part a, or if the suction tube is disconnected, see problem 2, part f. Also, air may enter through fittings which are not tightened properly, so check for any leaks around fittings or hoses. Once the source of the air is determined, the cylinders must be bled of all air. Most air can be removed from the system by lowering the gate to the ground to relieve all pressure from the cylinders, unpinning the cylinders, and cycling them back and forth several times from fully extended to fully retracted and allowing the pump to bypass through the relief valves for a few seconds in each direction.	
e. Reservoir was overfilled	See the MONTHLY INSPECTION AND MAINTENANCE in the "Maintenance	
or filled with liftgate in	Guide" section of this manual to find out what position the liftgate should be in when	
wrong position.	checking the reservoir level and how full the reservoir should be in that position.	

5. Problem – Platform difficult to unfold to horizontal position OR platform hard to fold up from horizontal position

Cause	Correction
a. Torsion bar broke	TT15 liftgates with platform load depths of 38 inches or greater are equipped with a torsion bar to assist unfolding and folding the platform. If the platform suddenly becomes heavier to fold and unfold, the torsion bar is likely broken. Replace the torsion bar if broken.
 b. Platform pivot pins are seizing up in platform pivots 	Check that the platform pivot pins turn freely in the platform pivots. Any tightness in these pivots will result in additional force required when folding or unfolding the platform. If the platform gradually became harder to fold and unfold, it is likely due to stiffness in the pivots. Replace worn bushings or corroded pins as necessary.

If you have any questions or problems that are not covered in this guide please call Thieman's Engineering Department at 1 800-524-5210.