



ATD-7485A

2-Ton Heavy-Duty Hydraulic Folding Engine Crane

Owner's Manual



Features:

- Heavy-duty welded construction with rugged reinforced tubular steel
- Metered control release valve for precise lowering control
- Double pump ram design lifts load on both up and down stroke
- Foldable for easy storage
- Includes safety straps
- Meets ANSI 2014 standards

Specifications:

- Base Length: 67.9"
- Base Width - Front: 38.8"
- Base Width - Rear: 31.9"
- Height: 61.75"
- Folded Height 59.6"
- Wheel Diameter - Front: 4"
- Wheel Diameter - Rear: 3.5"

Hook Height at Capacity:

- (#1) 2-Ton - Min. 11.8", Max. 78.75"
- (#2) 1.5-Ton - Min. 5.1", Max. 84.4"
- (#3) 1-Ton - Min. 0", Max. 90.2"
- (#4) 0.5-Ton - Min. 0", Max. 95.9"

Save these instructions. For your safety, read and understand the information contained within. The owner and operator should have an understanding of this product and safe operating procedures before attempting to use this product. Instructions and safety information should be conveyed in the operators native language before use of this product is authorized. Make certain that the operator thoroughly understands the inherent dangers associated with the use and misuse of the product. If any doubt exists as to the safe and proper use of this product as outlined in this factory authorized manual, remove from service until which time it is clear. **Inspect before each use.** Do not use if broken, bent, cracked or otherwise damaged parts are noted. If the crane has been or is suspected to have been subjected to a shock load, discontinue use until checked out by an authorized factory service center. Owners and operators of this equipment should be aware that the use and subsequent repair of this equipment may require special training and knowledge. It is recommended that an annual inspection be done by qualified personnel and that any missing or damaged parts, decals, warning / safety labels or signs be replaced with factory authorized replacement parts only. Any crane that appears to be damaged in any way, is worn or operated abnormally should be removed from service immediately until such time as repairs can be made.

PRODUCT DESCRIPTION

This ATD Tools Engine Crane is designed to safely lift and lower rated capacity engines. It is an aid in the removal and installation of automotive and light truck engines. Welded steel tube construction, heavy-duty chains and safety hooks, steel casters and wheels along with compliance with the latest **ASME / ANSI - PALD** standards ensure safety, strength and stability. The ATD-7485A features a foldable, space saver design.

SPECIFICATIONS

| Model | Base Length | Base Width (Front) | Base Width (Rear) | Height | Wheel Diameter (Front) | Wheel Diameter (Rear) | Weight |
|-----------|-------------|--------------------|-------------------|--------------------------|------------------------|-----------------------|----------|
| ATD-7485A | 67.9" | 38.8" | 31.9" | 61.75" (59.6" folded) | 4" | 3.5" | 266 lbs. |

| Model | Boom Position | Capacity | Min. Hook Height | Max. Hook Height | Boom Length |
|-----------|---------------|-----------|------------------|------------------|-------------|
| ATD-7485A | 1 | 2 Ton | 11.8" | 78.75" | 26.43" |
| | 2 | 1-1/2 Ton | 5.1" | 84.4" | 33.93" |
| | 3 | 1 Ton | 0" | 90.2" | 41.31" |
| | 4 | 1/2 Ton | 0" | 95.9" | 48.87" |

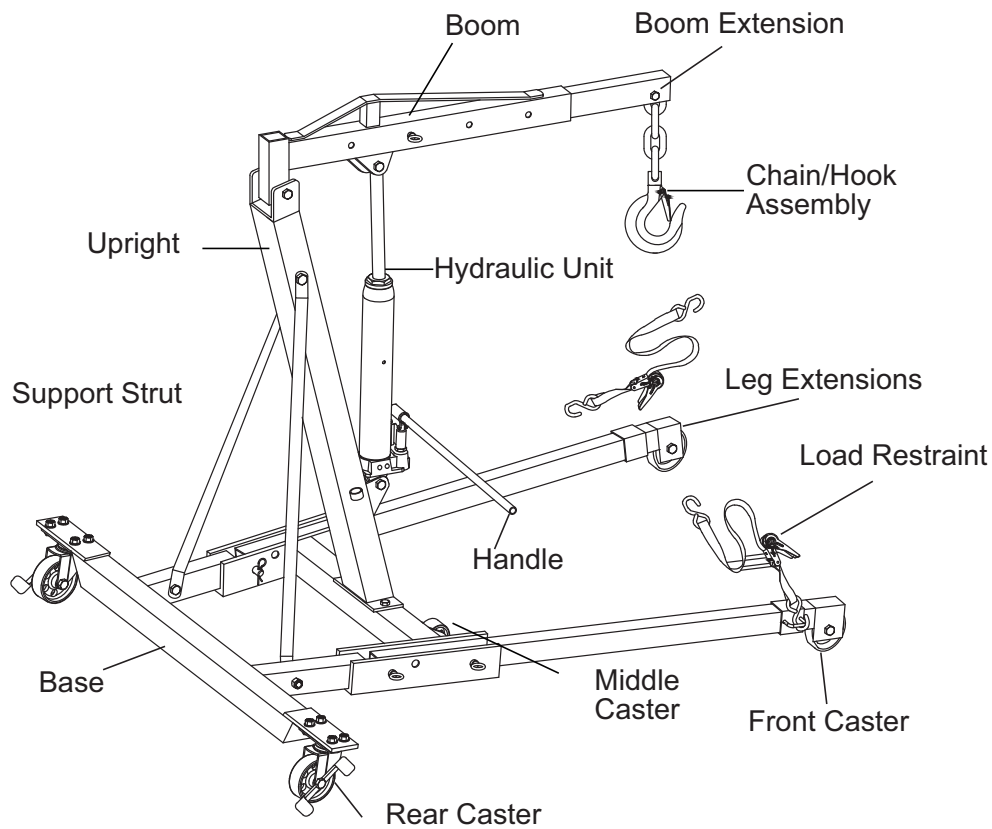
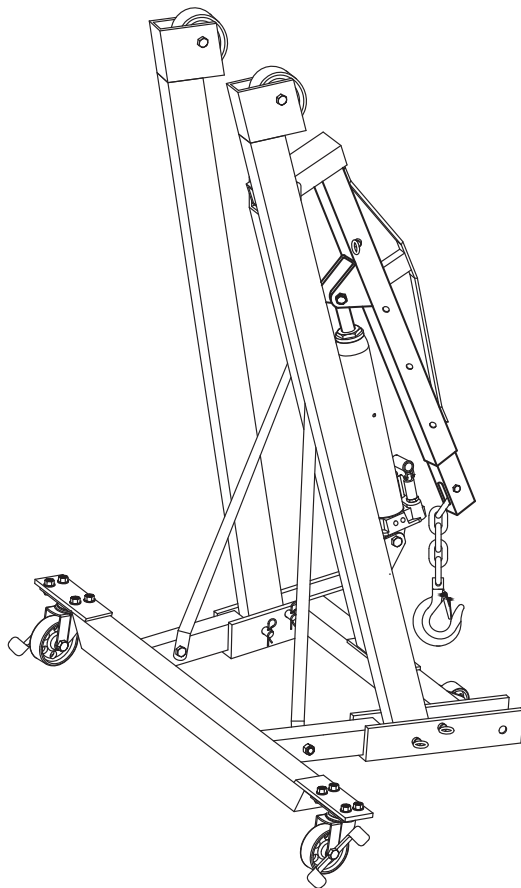


Figure 1- Model ATD-7485A nomenclature



Folding your ATD-7485A Engine Crane (see figure 2)

1. Lower boom to its minimum height.
2. Remove forward most lock pin (reference #10 in figure 3 on page 5) from each leg extension.
3. Carefully lift each leg into the upright position.
4. Reinstall lock pin (reference #10 in figure 3 on page 5) into middle hole on base frame leg connection.

Figure 2- Model ATD-7485A Storage Position

BEFORE USE

1. Inspect crane before each use. Do not use if bent, broken or cracked components are noted. Ensure that casters/wheels and boom move freely. Check for and tighten any loose assemblies.
2. Verify that the product and the application are compatible, if in doubt call for Technical Service (888) 332-6419.
3. Before using this product, read the owner's manual completely and familiarize yourself thoroughly with the product and the hazards associated with its improper use.
3. Open the release valve by turning the release valve lever counterclockwise (no more than 1/2 full turn).
4. With ram fully lowered, remove oil filler plug and pump handle 6 to 8 full strokes. This will help release any trapped air within the reservoir. Ensure the oil level is just below the oil filler hole. Reinstall the oil filler plug. Close release valve by turning it clockwise firmly.
5. Check to ensure that crane rolls freely, that the pump and release valve operate smoothly. Raise and lower the unloaded crane throughout the lifting range before putting into service.
6. Replace worn or damaged parts and assemblies with factory authorized replacement parts only. Lubricate as instructed in Maintenance Section.



WARNING

- Study, understand, and follow all instructions provided with and on this device before operating this device.
- Do not exceed rated capacity for each boom position.
- Use the device only on a hard, level surface.
- Only use chains and slings with a capacity equal to or greater than that of the crane.
- If loaded crane must be moved, make certain that load is stable, is in lowest possible position and is moved over a smooth, hard level surface.
- Avoid shock loads caused by the rapid opening and closing of release valve.
- Shock loads may cause the load to swing, causing the crane to flip violently, bend or break.
- Ensure the boom is fully lowered before checking or adding fluid to the hydraulic unit.
- Do not stand over loaded boom or in its intended line of travel.
- Do not use adapters or accessories that are not provided initially.
- Do not use the device for any purpose other than that for which it is intended.
- No alterations shall be made to this device.
- Failure to heed these warnings may result in personal injury and/or property damage.

TROUBLESHOOTING

| Symptom | Possible Causes | Corrective Action |
|--|--|---|
| Crane will not lift load | <ul style="list-style-type: none"> • Release valve not tightly closed • Overload condition | <ul style="list-style-type: none"> • Ensure release valve tightly closed • Remedy overload condition |
| Crane will lift, but not maintain pressure | <ul style="list-style-type: none"> • Release valve not tightly closed • Overload condition • Hydraulic unit malfunction | <ul style="list-style-type: none"> • Ensure release valve tightly closed • Remedy overload condition • Contact Tech. Service (888) 332-6419 |
| Crane will not lower after unloading | <ul style="list-style-type: none"> • Reservoir overfilled | <ul style="list-style-type: none"> • Ensure load is removed, then drain fluid to proper level |
| Poor lift performance | <ul style="list-style-type: none"> • Fluid level low • Air trapped in system | <ul style="list-style-type: none"> • Ensure proper fluid level • With ram fully retracted, remove oil filler plug to let pressurized air escape, then reinstall oil filler plug |
| Crane will not lift to full extension | <ul style="list-style-type: none"> • Fluid level low | <ul style="list-style-type: none"> • Ensure proper fluid level |

ASSEMBLY

1. Attach (2) rear casters (#1) to base (#26) with M8 x 16 bolts (#2).
2. Attach (2) middle wheel (#11) and (#12).
3. Slide on load restraint brackets (#34) onto ends of legs (#27).
4. Line up pivot hole on front leg (#27) with corresponding rear pivot hole and secure with pin (#10).
5. Attach upright (#29) to base (#26) with (2) M14 x 95 bolts (#8) and nuts (#7).
6. Attach (2) strut supports (#30) to base (#26) and upright (#29) with M14 x 95 bolts (#5) and M14 X 100 nuts (#6).
7. Place hydraulic unit (#25) on upright's support bracket and secure with M16 x 85 bolt (#5), and nut (#6).
8. Attach boom (#31) to upright (#29) with M16 x 110 bolt (#19), and nut (#20).
9. Pump jack until ram is extended approximately 2".
10. Align the hole on the hydraulic ram with the mounting hole of boom and secure with the M16 x 85 lock bolt (#5) and retainer nut (#6).
11. Slide boom extension (#32) into boom (#31) and secure with the lock pin (#21) and retainer lock pin (#9).
12. Attach chain/hook assembly (#33) to boom extension (#32) with M14 x 80 bolt (#22) and nut (#23).

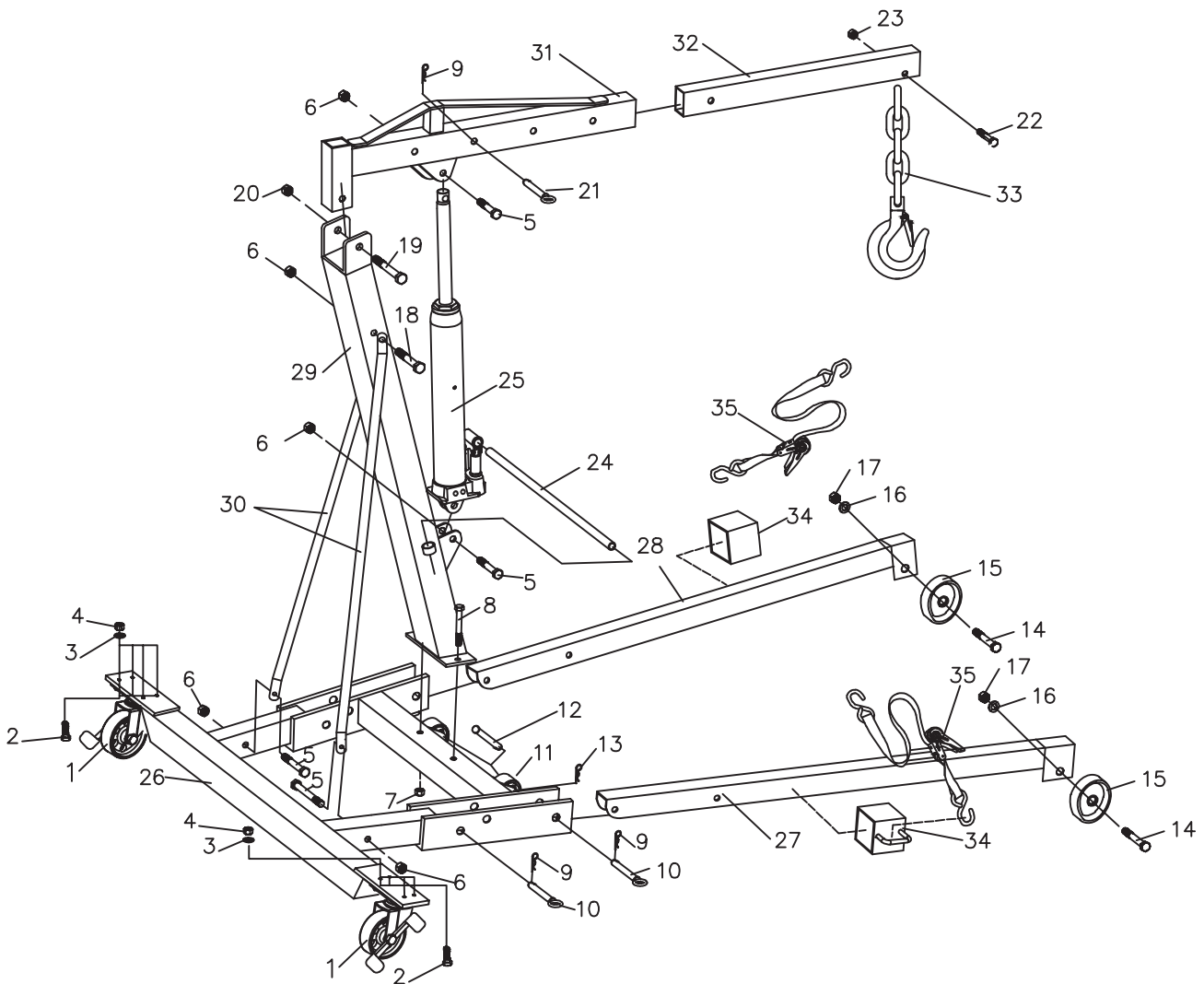


Figure 3 - Assembly Illustration for Model ATD-7485A

OPERATION

1. Load capacity should be coordinated with boom extension.
2. Secure engine to chain/sling hook assembly, ensure load is centered.
3. Follow vehicle service manual recommendations to remove engine. When ready to remove engine, turn release valve clockwise until firm. Pump handle until load is high enough to clear vehicle.

Note: Avoid rolling the loaded engine crane. To help position an engine stand if necessary, move only across smooth, level, seamless surfaces.

Before moving ensure the load:

- a. is lowered to the lowest practical position, but always below the center of gravity.
 - b. is prevented from swinging and inadvertent shifting.
4. Immediately transfer the load to appropriate engine support device (engine stand).
 5. Check to ensure stand is secure before working on or around.

! SAFETY MESSAGE !

Be sure all tools and personnel are clear before lowering load. Lift only on areas of the engine as specified by the vehicle manufacturer.



WARNING



To avoid crushing and related injuries: NEVER work on, under or around a load supported only by engine crane. Immediately transfer the load to an appropriately rated engine stand.

MAINTENANCE

Important: Use only a good grade hydraulic jack oil. We recommend Mobil DTE 13M or equivalent. Avoid mixing different types of fluid and NEVER use brake fluid, turbine oil, transmission fluid, motor oil or glycerin. Improper fluid can cause premature failure of the jack and the potential for sudden and immediate loss of load.

Adding oil

1. With ram fully lowered and pump piston fully depressed, set jack in its upright, level position.
2. Remove oil filler plug and fill until oil is level with the filler plug hole. Re-install oil filler plug.

Changing oil

For best performance and longest life, replace the complete fluid supply at least once per year.

1. With ram fully lowered and pump piston fully depressed, remove from crane body. With jack in its upright, level position, remove oil filler plug.
2. Lay the jack on its side and drain the fluid into a suitable container.

Note: Dispose of hydraulic fluid in accordance with local regulations.

3. Set jack in its level upright position.
4. Fill with oil until just below the rim of the oil filler plug hole. Re-install filler plug.

Lubrication

A coating of light lubricating oil to pivot points, axles and hinge will help to prevent rust and assure that wheels, casters and pump assemblies move freely.

Cleaning

Periodically check the pump piston and ram for signs of rust or corrosion. Clean as needed and wipe with an oily cloth.

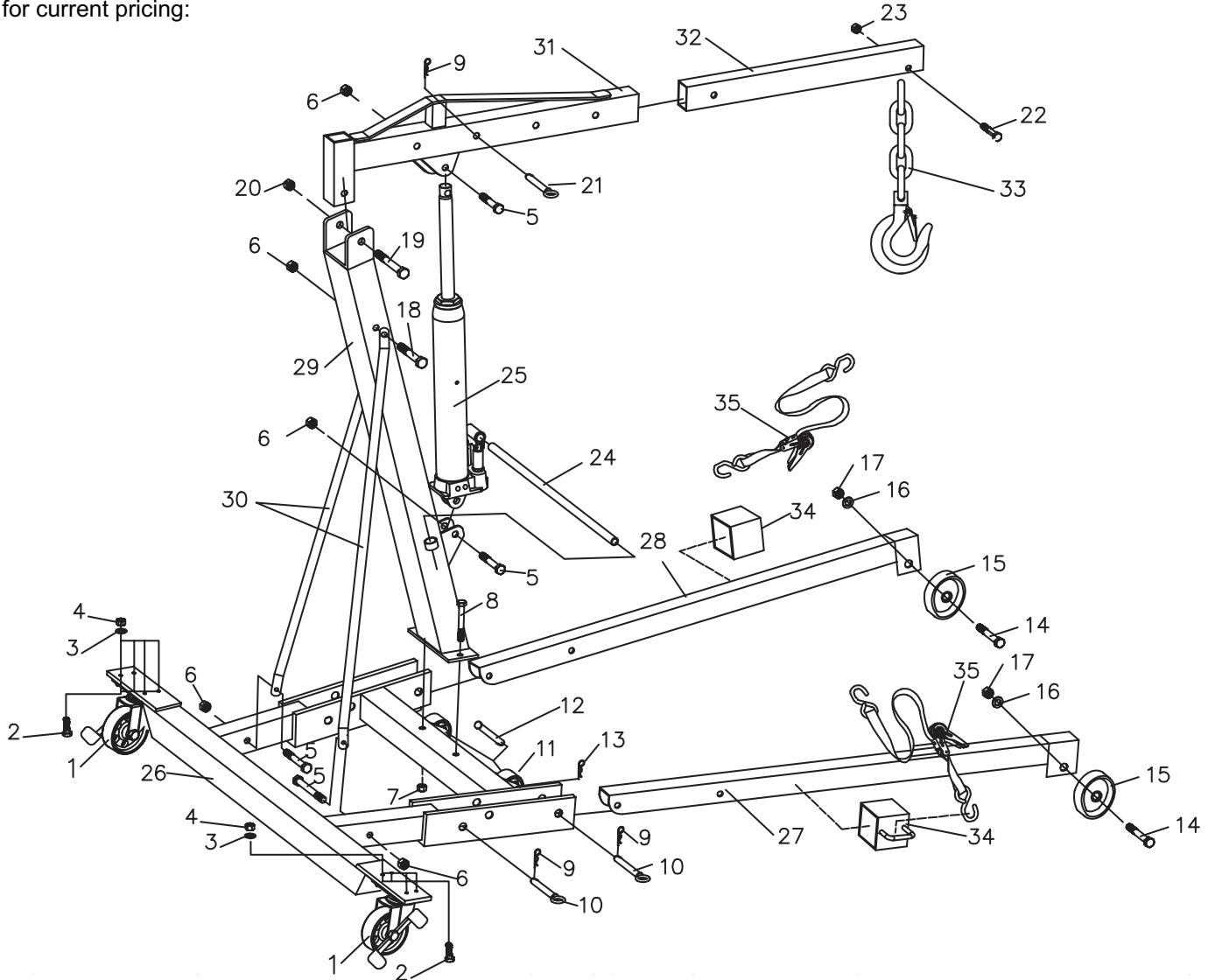
Note: Never use sandpaper or abrasive material on these surfaces!

Storage

When not in use, store the crane with pump piston and ram fully retracted.

REPLACEMENT PARTS

Not all components of the jack are replacement items, but are illustrated as a convenient reference for position in the assembly sequence. When ordering parts, give model number, part number and description. Call your distributor for current pricing:



| ITEM# | ORDERING PART# | PART DESCRIPTION | QTY |
|-------|----------------|-----------------------|-----|
| 1 | 7485-0001 | CASTER 3.5" | 2 |
| 2 | 7485-00HK | CASTER BOLT M8 x 25 | 8 |
| 3 | 7485-00HK | CASTER LOCK WASHER M8 | 8 |
| 4 | 7485-00HK | CASTER NUT M8 | 8 |
| 5 | 7485-00HK | BOLT M16 x 85 | 4 |
| 6 | 7485-00HK | NUT M16 | 6 |
| 7 | 7485-00HK | NUT M14 | 2 |
| 8 | 7485-00HK | BOLT M14 x 110 | 2 |
| 9 | 7485-00HK | COTTER PIN | 5 |
| 10 | 7485-00HK | PIN | 4 |
| 11 | 7485-0011 | MIDDLE WHEEL | 2 |
| 12 | 7485-00HK | AXLE PIN | 2 |
| 13 | 7485-00HK | COTTER PIN | 2 |
| 14 | 7485-00HK | AXLE BOLT M12 x 75 | 2 |
| 15 | 7485-0015 | FRONT WHEEL | 2 |
| 16 | 7485-00HK | LOCK WASHER M12 | 2 |
| 17 | 7485-00HK | NUT M12 | 2 |
| 18 | 7485-00HK | BOLT M16 x 100 | 1 |

| ITEM# | ORDERING PART# | PART DESCRIPTION | QTY |
|-------|----------------|-------------------------|-----|
| 19 | 7485-00HK | BOLT M20 x 100 | 1 |
| 20 | 7485-00HK | NUT M20 | 1 |
| 21 | 7485-00HK | PIN | 1 |
| 22 | 7485-00HK | BOLT M14 x 75 | 1 |
| 23 | 7485-00HK | NUT M14 | 1 |
| 24 | 7485-0024 | HANDLE | 1 |
| 25 | ATD-7487 | POWER UNIT | 1 |
| 26 | 7485-0026 | BASE | 1 |
| 27 | 7485-0027 | RIGHT LEG EXTENSION | 1 |
| 28 | 7485-0028 | LEFT LEG EXTENSION | 1 |
| 29 | 7485-0029 | UPRIGHT | 1 |
| 30 | 7485-0030 | SUPPORT STRUT | 2 |
| 31 | 7485-0031 | BOOM | 1 |
| 32 | 7485-0032 | BOOM EXTENTION | 1 |
| 33 | 7485-0033 | CHAIN/HOOK ASSEMBLY | 1 |
| 34 | 7485-0034 | LOAD RESTRAINT TIE DOWN | 2 |
| 35 | 7485-0035 | LOAD RESTRAINT STRAPS | 2 |
| N/S | 7485-00SK | SEAL KIT | 1 |

* 7485-00HK hardware kit contains refernce numbers 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 16, 17, 18, 19, 20, 21, 22 & 23

Figure 4 - Replacement Parts Illustration for model ATD-7485A



THIS WARRANTY AND CONFIRMED RECEIPT(S) SHOULD BE RETAINED BY THE CUSTOMER AT ALL TIMES

PURCHASED FROM: _____

DATE PURCHASED: _____

INVOICE/RECEIPT NUMBER: _____

Your ATD-7485A is warranted for a period of 12 months from the original purchase date.

For a period of one (1) year from your purchase date, ATD Tools, Inc. will repair or replace (at its option) without charge, your ATD product if it was purchased new and the product has failed due to a defect in material or workmanship which you experienced during normal use of the product. This limited warranty is your exclusive remedy.

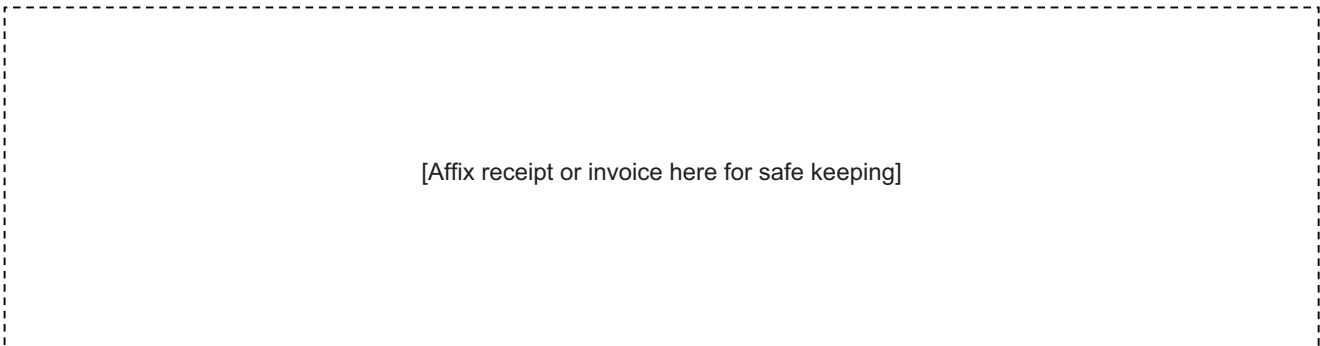
To access the benefits of this warranty, contact your supplier, or point of sale directly. You may be advised to return the product under warranty, freight prepaid, to your supplier for warranty determination.

If this ATD product is altered, abused, misused, modified, or undergoes service by an unauthorized technician, your warranty will be void. We are not responsible for damage to ornamental designs you place on this ATD product and such ornamentation should not cover any warnings or instructions or they may void the warranty. This warranty does not cover scratches, superficial dents, and other abrasions to the paint finish that occur under normal use. It also does not cover normal wear items such as but not limited to brushes, batteries, drill bits, drill chucks, pads or blades.

Subject to the law in your state:

- (1) Your sole and exclusive remedy is repair or replacement of the defective product as described above.
- (2) ATD is not liable for any incidental damages, including but not limited to, lost profits and unforeseeable consequences.
- (3) The repair and replacement of this product under the express limited warranty described above is your exclusive remedy and is provided in lieu of all other warranties, express or implied. All other warranties, including implied warranties and warranties of merchantability or fitness for a particular purpose are disclaimed and, if disclaimer is prohibited, these warranties are limited to one year from your date of purchase of this product.

Some states' laws do not allow limited durations on certain implied warranties and some states' laws do not allow limitations on incidental or consequential damages. You should consult the law in your state to determine how your rights may vary.



[Affix receipt or invoice here for safe keeping]