



ATD-7485B

2-Ton Heavy-Duty Hydraulic Folding Engine Crane Owner's Manual



(Folded View)

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 or exceeds ASME / PASE 2019 standards

Specifications:

- Base Length: 65.2"
- Base Width - Front: 39.4"
- Base Width - Rear: 31.5"
- Folded Height: 60.1"
- Wheel Diameter - Front: 3.5"
- Wheel Diameter - Rear: 3.5"
- Height: 58.9"

Hook Height at Capacity:

- (#1) 2-Ton - Min. 15.4", Max. 70.9"
- (#2) 1.5-Ton - Min. 9.8", Max. 76.8"
- (#3) 1-Ton - Min. 4.3", Max. 83.1"
- (#4) 0.5-Ton - Min. 0", Max. 88.6"

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

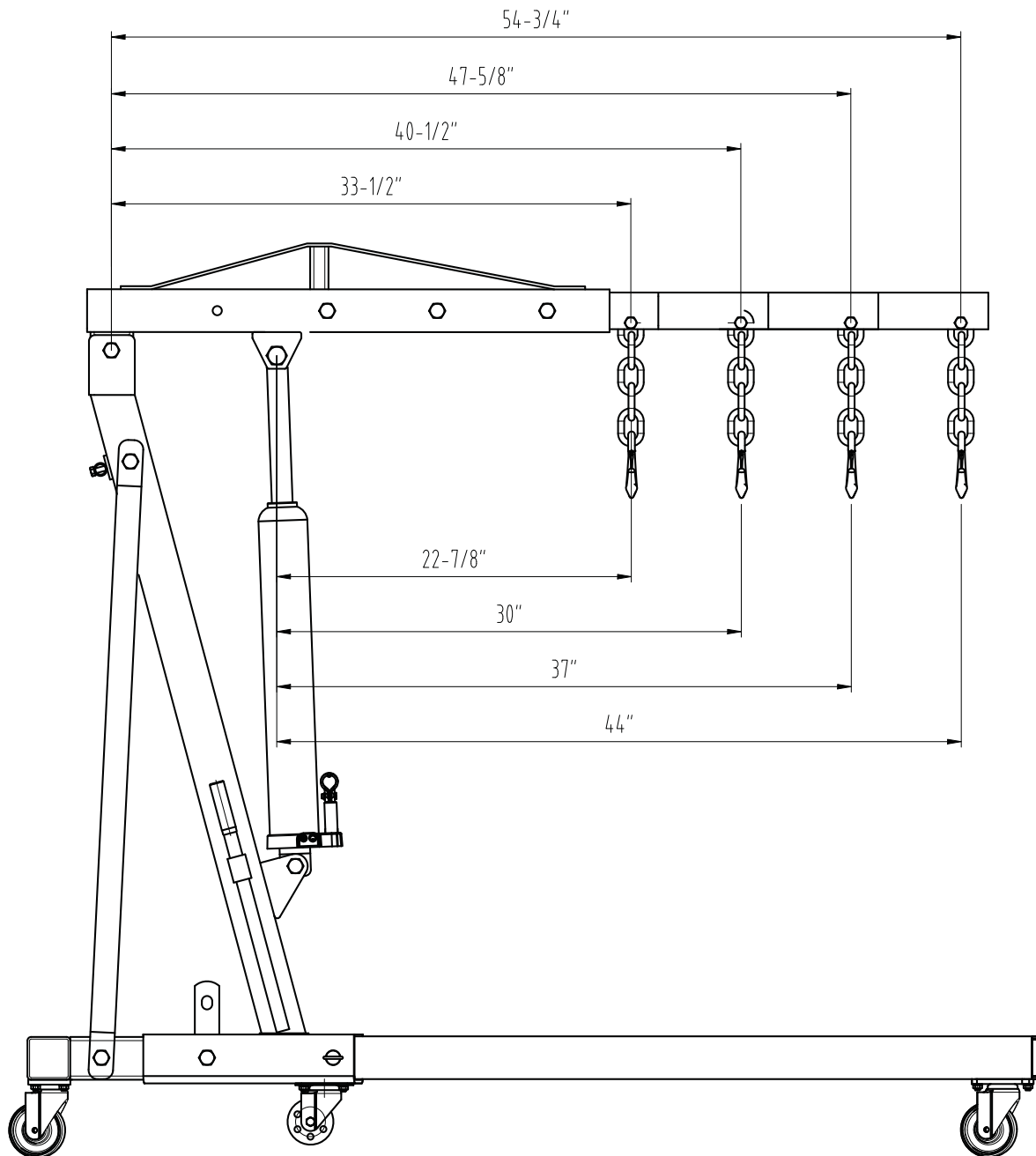
This ATD Tools Engine Crane is designed to safely lift and lower rated capacity engines. It is an aid in the removal and installation of automotive and light truck engines. Welded steel tube construction, heavy-duty chains and safety hooks, steel casters and wheels along with compliance with the latest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

SPECIFICATIONS

Model	Base Length	Base Width (Front)	Base Width (Rear)	Folded Height	Wheel Diameter (Front)	Wheel Diameter (Rear)	Weight
ATD-7485B	65.2"	39.4"	31.5"	60.1"	3.5"	3.5"	187 lbs.

Model	Boom Position	Capacity	Min. Hook Height	Max. Hook Height
ATD-7485B	1	2 Ton	15.4"	70.9"
	2	1-1/2 Ton	9.8"	76.8"
	3	1 Ton	4.3"	83.1"
	4	1/2 Ton	0"	88.6"

BOOM LENGTH SPECIFICATIONS



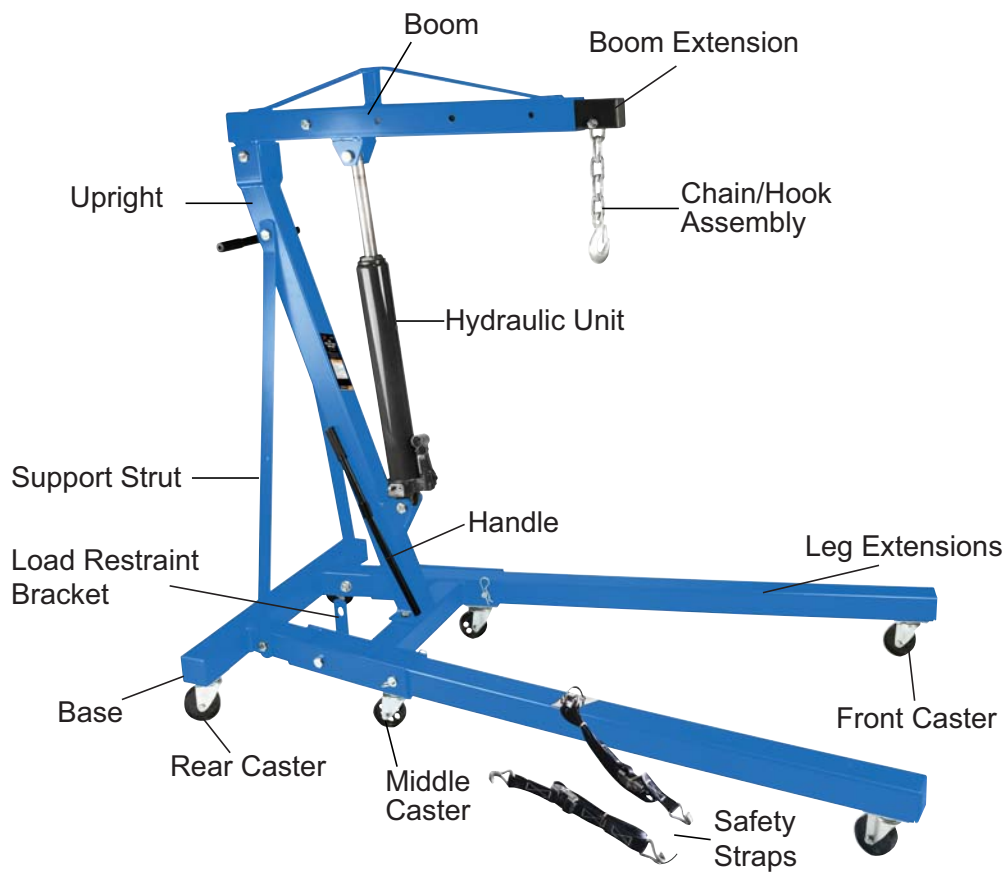


Figure 1- Model ATD-7485B part identification



Folding your ATD-7485B Engine Crane

1. Lower boom to its minimum height.
2. Remove forward most lock pin (reference #28 on page 6) from each leg extension.
3. Carefully lift each leg into the upright position.
4. Reinstall lock pin (reference #28 on page 6) into middle hole on base frame leg connection.

Figure 2- Model ATD-7485B 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
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 your distributor for instructions
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

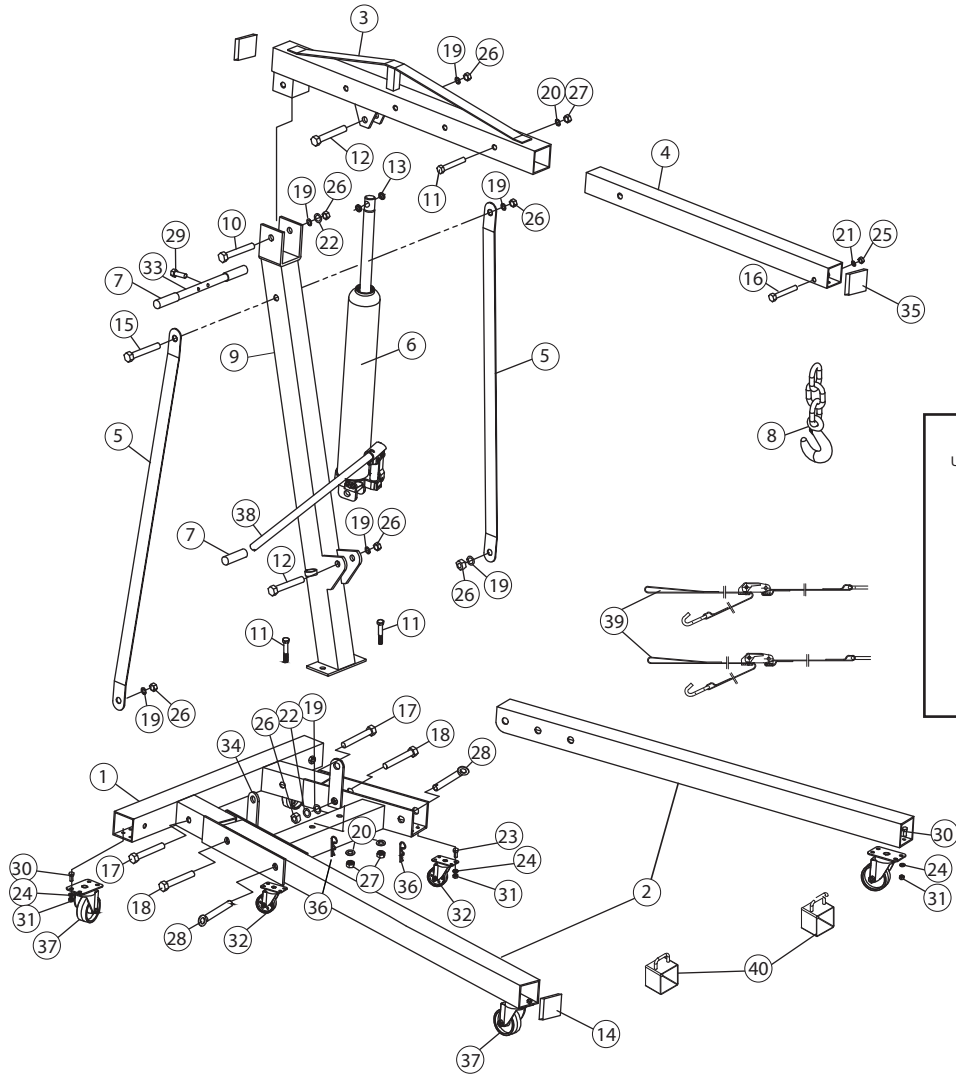
ATD-7485B ASSEMBLY

Refer to the replacement parts on page 6 for illustrations.


1. Attach (4) caster A (#37) to frame base (#1) with M8 x 16 bolts (#30), M8 washer (#24), M8 nuts (#31)
2. Attach (2) caster B (#32) and (#12) with M8 x 16 bolts (#23), nuts (#31) and washer (#24).
3. Line up pivot hole on front leg (#2) with corresponding rear pivot hole and secure with pin (#28) and R pin (#36)
4. Attach load restraint brackets (#34) to base assembly with M16 x 110 bolt grade 4.8 bolts (#18) and washer (#19), spring washer (#22) and M16 nut (#26). Repeat for both sides.
5. Attach main support post (#9) to frame base (#1) with (2) M14 x 90 bolts (#11), M14 washers (#20) and M14 nuts (#27).
6. Attach (2) support straps (#5) to frame base (#1) and main support post (#9) with M16 x 90 grade 4.8 bolts (#17), M16 washers (#19) and M16 nuts (#26).
7. Place hydraulic unit (#6) on main support post's support bracket and secure with M16 x 90 bolt grade 8.8 bolts (#12), M16 washer (#19) and M16 nut (#26).
8. Attach boom (#3) to main support post (#9) with M16 x 90 bolt grade 8.8 bolts (#12), M16 washer (#19) and M16 nut (#26).
9. Pump jack until ram is extended approximately 2".
10. Insert bushing (#13) into hole in ram. Align the hole on the hydraulic ram with the mounting hole of boom and secure with the M16 x 90 lock bolt (#12) M16 washer (#19) and M16 nut (#26).
11. Slide boom extension (#4) into boom (#3) and secure with the M14 x 90 bolt (#11) M14 washer (#20) and the M14 nut (#27).
12. Attach chain/hook assembly (#8) to boom extension (#4) with M14 x 80 bolt (#16), M14 washer (#21) and M14 nut (#25).
13. Snap plastic cover (#35) into end of boom extension (#4)
14. Attach pull handle (# 33) to main support post (#9) with M8 x 30 bolt (#29) and attach handle grip (#7) to both ends
15. Snap plastic cover (#14) into the end of the front legs (#2)
16. Attach handle grip (#7) to pump handle (#38) and slide into handle sleeve on hydraulic ram (#6)


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:



NOTE:
THERE ARE TWO GRADES OF BOLTS USED FOR ASSEMBLY. PLEASE MAKE NOTE OF THE FOLLOWING:

 #17 & #18 - GRADE 4.8

 #10 & #12 - GRADE 8.8

ITEM#	ORDERING PART#	PART DESCRIPTION	QTY
1	PRT7485B-01	FRAME BASE	1
2	PRT7485B-02	FRONT LEG	2
3	PRT7485B-03	BOOM	1
4	PRT7485B-04	BOOM EXTENSION	1
5	PRT7485B-05	SUPPORT STRAP	2
6	PRT7485B-06	HYDRAULIC RAM	1
7	PRT7485B-07	HANDLE GRIP	3
8	PRT7485B-08	HOOK CHAIN ASSEMBLY	1
9	PRT7485B-09	MAIN SUPPORT POST	1
10	PRT7485B-HK	BOLT M16 x 110, GRADE 8.8	1
11	PRT7485B-HK	BOLT M14 x 90	3
12	PRT7485B-HK	BOLT M16 x 90, GRADE 8.8	2
13	PRT7485B-13	BUSHING	2
14	PRT7485B-14	PLASTIC COVER	5
15	PRT7485B-HK	BOLT M16 x 100	1
16	PRT7485B-HK	BOLT M12 x 75	1
17	PRT7485B-HK	BOLT M16 x 90, GRADE 4.8	2
18	PRT7485B-HK	BOLT M16 x 110, GRADE 4.8	2
19	PRT7485B-HK	WASHER M16	8
20	PRT7485B-HK	WASHER M14	3

ITEM#	ORDERING PART#	PART DESCRIPTION	QTY
21	PRT7485B-HK	WASHER M12	1
22	PRT7485B-HK	SPRING WASHER M16	3
23	PRT7485B-HK	BOLT M8 x 16	8
24	PRT7485B-HK	WASHER M8	24
25	PRT7485B-HK	NUT M12	1
26	PRT7485B-HK	NUT M16	8
27	PRT7485B-HK	NUT M14	3
28	PRT7485B-HK	FRAME PIN W/HAIR PIN	2
29	PRT7485B-HK	BOLT M8 x 30	2
30	PRT7485B-HK	BOLT M8 x 16	16
31	PRT7485B-HK	NUT M8	24
32	PRT7485B-32	CASTER B	2
33	PRT7485B-33	PULL HANDLE	1
34	PRT7485B-34	RESTRAINT BRACKET	2
35	PRT7485B-35	PLASTIC COVER	1
36	PRT7485B-HK	R-PIN	2
37	PRT7485B-37	CASTER A	4
38	PRT7485B-38	PUMP HANDLE	1
39	PRT7485B-39	TIE DOWN STRAPS	2
40	PRT7485B-40	STRAP FIXING BASE	2

PRT7485B-HK HARDWARE KIT CONTAINS - 10, 11, 12, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31 & 36

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.



WARRANTY
1 YEAR LIMITED WARRANTY

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

PURCHASED FROM: _____

DATE PURCHASED: _____

INVOICE/RECEIPT NUMBER: _____

Your ATD-7485B 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]