

MD-80
AIRCRAFT MAINTENANCE MANUAL
ATTACHMENT

1. Removal/Installation Nose gear Wheel and Tire

NOTE: If the tire being removed deflated or failed while the aircraft was moving, the adjacent tire on the same axle shall also be removed and returned to the retreader for evaluation.

A. Remove Wheel and Tire

- (1) Make certain that landing gear ground lock pins are installed, and that main gear wheels are chocked.
- (2) Raise nosewheel and tire clear of ground.

B. Jacking the aircraft at nose landing gear axle: (Figure 201), (Figure 202)

- (1) Ensure aircraft is electrically (static) grounded. **VERBAL**
- (2) Ensure wheel chocks are installed at the main landing gear wheels. **VERBAL**
- (3) Position the NLG axle jack below the axle ball and extend jack until snug against axle ball.

NOTE: If a nose axle jack adapter is necessary, install the adapter to the axle ball. Position the MLG axle jack below the adapter and extend until jack is snug against adapter.

- (4) Make sure that the area around the aircraft is clear of personnel and equipment.
- (5) Extend the NLG landing gear axle jack until tires clear ground a minimum of 1.0 in. (25.4 mm).

C. Remove Nose Gear Water Deflector (Figure 203)

- (1) Remove Outboard Water Deflector

NOTE: Removal/installation is identical for left and right outboard deflectors.

- (a) Remove cotter pins (14) and nuts (12) connecting the outboard deflector support (11) to the outboard water deflector (2 or 3). (Figure 203)
- (b) Remove Cotter pin from outboard deflector retaining nut (5), remove retaining nut.
- (c) Remove outboard water deflector.

D. Remove Wheel and Tire (Figure 204)

- (1) Deflate nosewheel tire by removing cap from Air Filler valve and remove valve core from valve stem.

NOTE: Tire deflation is not required if the wheel and tire assembly is removed to facilitate other maintenance and will be reinstalled.

- (2) Remove lockwire, screw (8) and washer (9) from axle nut lock washer (3). (Figure 204)
- (3) Remove axle nut (2).
- (4) Remove axle nut lock washer (3), and seal (4).

MD-80
AIRCRAFT MAINTENANCE MANUAL
ATTACHMENT



AXLE NUTS AND AXLES ARE CONSIDERED MATCHED SETS. DURING OVERHAUL, AN AXLE CAN HAVE THE THREADS REWORKED, REQUIRING A SPECIAL SIZE NUT. THE REWORKED AXLE AND MATCHING NUT MUST NOT BE INTERCHANGED WITH ANY OTHER NUT. THE AXLE AND NUT WILL BE MARKED. IT CAN BE COLOR CODED OR HAVE A PART NUMBER THAT MATCHES THE PART NUMBER ETCHED ON THE AXLE. THIS NUT MUST REMAIN WITH THAT AXLE POSITION AT ALL TIMES, EVEN FOR A SHOP VISIT FOR REWORK. THIS WILL HELP PREVENT LOSS OF A WHEEL AND THE TIRE DURING FLIGHT.

- (5) Install axle thread protector or speed tape. (Figure 205)

NOTE: The use of speed tape is acceptable if thread protector is unavailable.



THE WHEEL AND TIRE WEIGHS APPROXIMATELY 61 POUNDS (28 KILOGRAMS). USE CARE TO AVOID INJURY TO PERSONNEL AND TO PREVENT

- (6) Remove outer bearing (5) and remove wheel and tire assembly.
(7) Remove inner bearing (6) and inner bearing seal (7) from axle.
(8) Visually check exposed NLG axle for minor surface damage to cadmium plating such as nicks or dings which result in exposed base steel. **VERBAL**
(a) Damage which is less than 3 square inches (76.2 mm), can be repaired with brush cadmium plating.
(b) Damage greater than 3 square inches (76.2 mm), part must be replaced.

E. Install Wheel and Tire (Figure 204)



USE THE HAZARDOUS MATERIAL WARNINGS GIVEN BELOW FOR THE STEPS THAT FOLLOW.

THE HAZARDOUS MATERIAL WARNINGS ARE LISTED AFTER THE INTRODUCTION HAZARDOUS MATERIAL WARNINGS

HAZMAT 1546, LUBRICANT/GREASE (DPM 3323)

HAZMAT 1600, REFER TO 1600

- (1) Before installing a nose wheel/tire assembly, check the items that follow:

EFFECTIVITY

...

MD-80
AIRCRAFT MAINTENANCE MANUAL
ATTACHMENT

- (a) Check tire for general condition.
- (b) Check wheel for general condition. Make sure there are a minimum of 2 threads visible beyond each of the 8 tie bolt lock nuts, if 2 treads are not visible reject tire.
- (c) Check wheel for general condition. Make sure the 8-wheel tie bolts are installed.
- (d) Check axle, bearings, and races for general condition.
- (e) Lubricate bearings with grease. **VERBAL**
- (f) Verify axle thread protector or tape is installed.

NOTE: The use of speed tape is acceptable if thread protector is unavailable

NOTE: If bearing grease is red in color, use Mobil SHC-100 grease. If bearing grease is brown in color, use Aeroshell #5 grease.

- (2) Install seal (7) and inner bearing (6) on axle, press flush against water deflector support.
(Figure 204)

 WARNING	THE WHEEL AND TIRE WEIGHS APPROXIMATELY 61 POUNDS (28 KILOGRAMS). USE CARE TO AVOID INJURY TO PERSONNEL AND TO PREVENT DAMAGE TO AXLE THREADS.
 WARNING	AXLE NUTS AND AXLES ARE CONSIDERED MATCHED SETS. DURING OVERHAUL, AN AXLE CAN HAVE THE THREADS REWORKED, REQUIRING A SPECIAL SIZE NUT. THE REWORKED AXLE AND MATCHING NUT MUST NOT BE INTERCHANGED WITH ANY OTHER NUT. THE AXLE AND NUT WILL BE MARKED. IT CAN BE COLOR CODED OR HAVE A PART NUMBER THAT MATCHES THE PART NUMBER ETCHED ON THE AXLE. THIS NUT MUST REMAIN WITH THAT AXLE POSITION AT ALL TIMES, EVEN FOR A SHOP VISIT FOR REWORK. THIS WILL HELP PREVENT LOSS OF A WHEEL AND THE TIRE DURING FLIGHT.

- (3) Raise wheel and tire into position and carefully install on axle.
- (4) Install outer bearing (5) and seal (4). Remove axle thread protector or speed tape.
- (5) Make sure that the threads are clean of debris.

 WARNING	THE WHEEL AND TIRE WEIGHS APPROXIMATELY 61 POUNDS (28 KILOGRAMS). USE CARE TO AVOID INJURY TO PERSONNEL AND TO PREVENT DAMAGE TO AXLE THREADS.
---	---

EFFECTIVITY

... ..

32-40-02

MD-80
AIRCRAFT MAINTENANCE MANUAL
ATTACHMENT



GREASE LUBRICANT IS AN AGENT THAT IS AN IRRITANT. MAKE SURE ALL PERSONS OBEY ALL OF THE PRECAUTIONS WHEN GREASE LUBRICANT IS USED.

- DO NOT USE IN AREAS WHERE THERE IS HIGH HEAT, SPARKS, OR FLAMES.
- USE IN AN AREA OPEN TO THE AIR.
- CLOSE THE CONTAINER WHEN NOT USED.
- DO NOT GET GREASE LUBRICANT IN THE EYES, ON THE SKIN, OR ON YOUR CLOTHES.
- DO NOT BREATHE THE GAS.



REFER TO THE APPLICABLE MANUFACTURER'S OR SUPPLIER'S MSDS FOR:

- MORE PRECAUTIONARY DATA
- APPROVED SAFETY EQUIPMENT
- EMERGENCY MEDICAL AID.

TALK WITH THE LOCAL SAFETY DEPARTMENT OR AUTHORITIES FOR THE PROCEDURES TO DISCARD THIS HAZARDOUS AGENT.

- (6) Install axle nut lock washer (3), and axle nut (2); tighten axle nut (2) finger tight.
- (7) Rotate wheel and tighten axle nut to 50 foot-pounds (600 inch-pounds) (67.8 Nm).
- (8) Loosen axle nut until free.
- (9) Tighten axle nut to 10 foot-pounds (120 inch-pounds) (13.6 Nm), then tighten to next locking position.

NOTE: If axle nut does not travel around axle a minimum of 13/32-inch (10.32 mm) (measured at O.D. of the nut flange) from 10 foot-pounds (120 inch-pounds) (13.6 Nm) torque position to first locking position tighten nut to next locking position.



MAKE SURE THAT THE SCREW PROTRUDES INTO AXLE NUT LOCKING SLOT. IF IT DOES NOT DAMAGE TO WHEEL OR AXLE NUT THREADS MAY RESULT.

- (10) Install screw (8) and washer (9) on axle nut lock washer (3). Safety screw with lockwire. (Figure 204)
- (11) Reinstall valve core in the valve stem and install cap.
- (12) Inflate tire to recommended pressure if necessary. **VERBAL**

EFFECTIVITY

... ..

32-40-02

AIRCRAFT MAINTENANCE MANUAL

ATTACHMENT

F. **Install Outboard Water Deflector** (Figure 203)

- (a) Place outboard deflector (2 or 3) on axle shaft (6) and install washers (13) and nuts (12) to support (11).
- (b) Tighten deflector retaining nut (5) to a torque of 360 in-lb. (41 Nm) to 690 in-lb. (78 Nm) and install washer (7) and cotter pin (8).
- (c) Tighten nuts (12) to a torque of 150 in-lb. (41 Nm) to 250 in-lb. (78 Nm).
- (d) Install cotter pins (14) in nuts.



MAKE SURE ALL PERSONS ARE CLEAR OF LANDING GEAR DOORS, LANDING GEAR, AND THE ADJACENT AREA. THIS WILL PREVENT INJURY TO PERSONS AND DAMAGE TO EQUIPMENT.



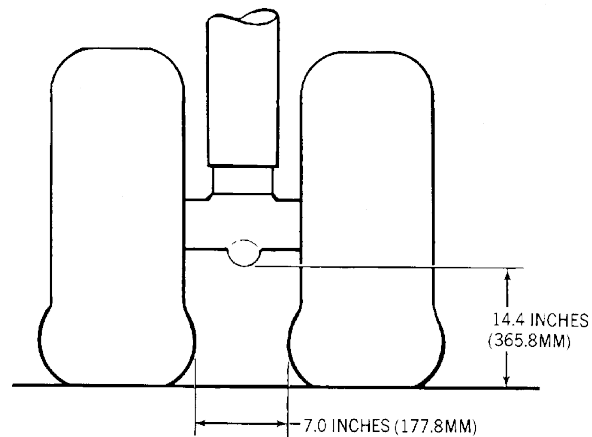
WHEN YOU LOWER THE AIRCRAFT OFF JACKS, REMOVE ALL EQUIPMENT FROM THE AREA. THIS WILL HELP PREVENT DAMAGE TO THE AIRCRAFT AND EQUIPMENT.

G. **Lowering Instructions**

- (a) On completion of maintenance, retract jack until aircraft weight in on its gear.
 - (b) Remove jack from under nose gear and away from the aircraft.
- H. Remove the NLG lock pins. **VERBAL**

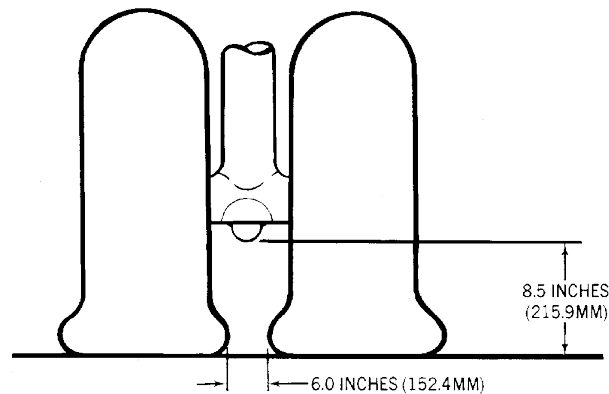
Tell the judge that you are done.

MD-80
AIRCRAFT MAINTENANCE MANUAL
ATTACHMENT



*GROSS WEIGHT WITH NORMAL TIRE INFLATION
 MAIN GEAR

JACK POINT	MAX. LOAD- TONS		JACK POINT HEIGHT (IN INCHES/MILLIMETERS) ABOVE GROUND							
			STATIC		FLAT TIRES		ON RIMS		TIRES 2 INCHES CLEAR OF GROUND	
	TONS	TONS METRIC	INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
MLG	35	31.75	14.4	365.8	8.4	213.4	7.6	193.0	20.4	518.2
NLG	7.5	6.8	8.5	215.9	6.6	167.6	5.3	134.6	12.3	312.4



GROSS WEIGHT WITH NORMAL TIRE INFLATION
 NOSE GEAR

* THIS DIMENSION IS VARIABLE WHEN TIRES ARE UNDERINFLATED OR FLAT

88B2-7-7B

Nose Landing Gear Axle Jacks

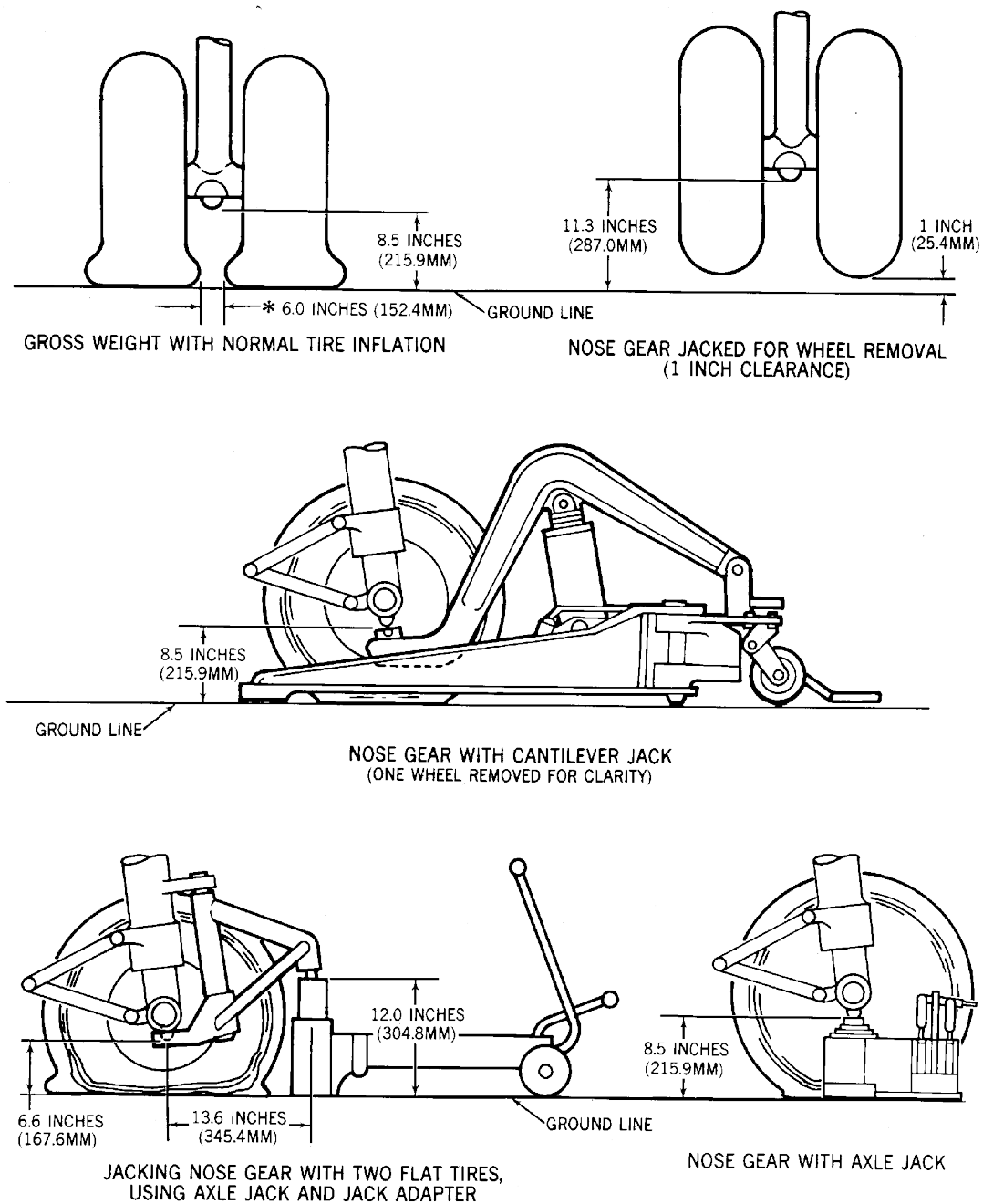
Figure 201

EFFECTIVITY
.....

TP-80MM-AAL

32-40-02

MD-80
AIRCRAFT MAINTENANCE MANUAL
ATTACHMENT



* THIS DIMENSION IS VARIABLE WHEN TIRES ARE UNDERINFLATED OR FLAT.

BBB2-7-2B

Nose Landing Gear Axle Jacks

Figure 202

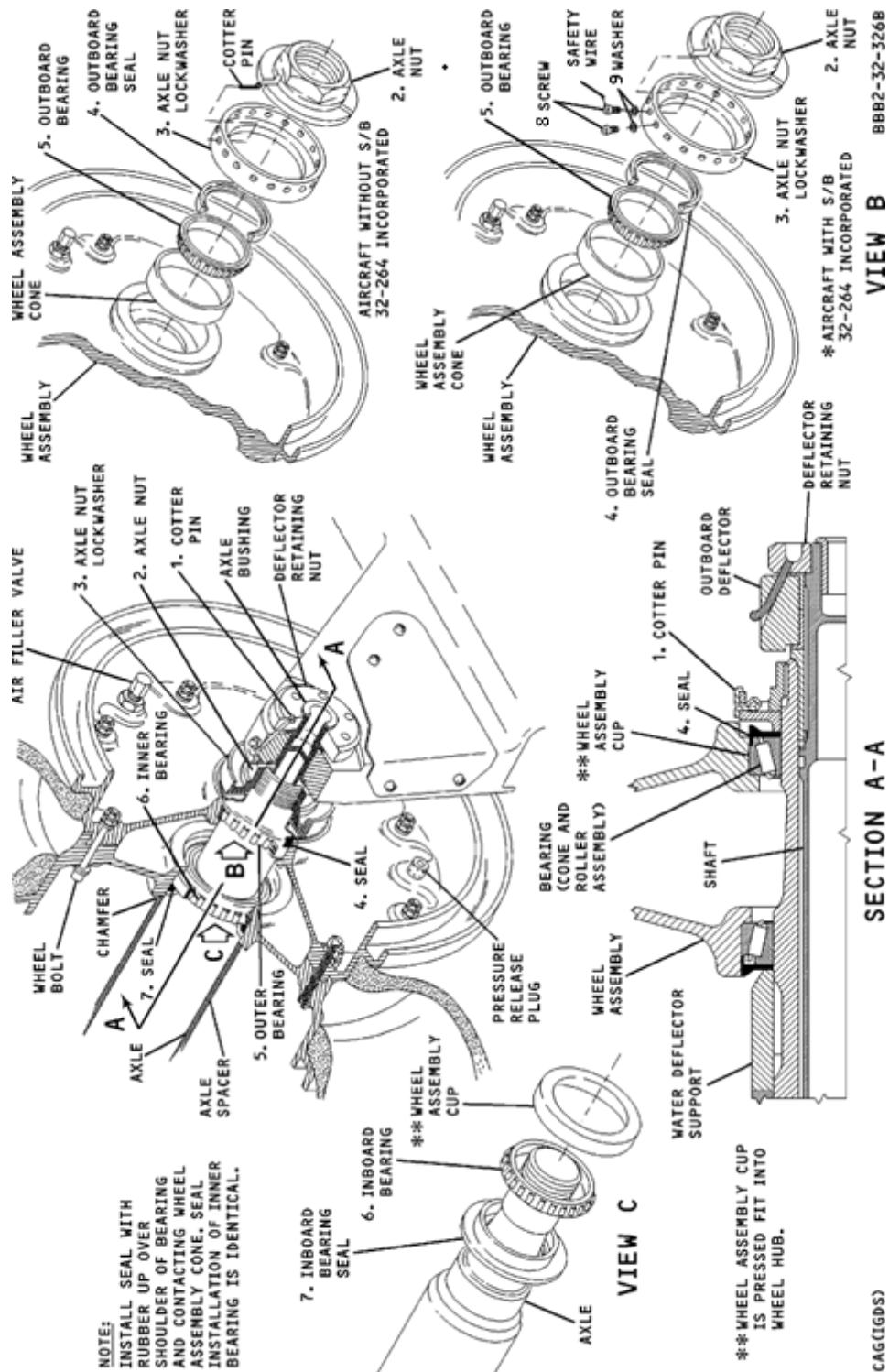
EFFECTIVITY	
...	

TP-80MM-AAL

32-40-02

AIRCRAFT MAINTENANCE MANUAL

ATTACHMENT



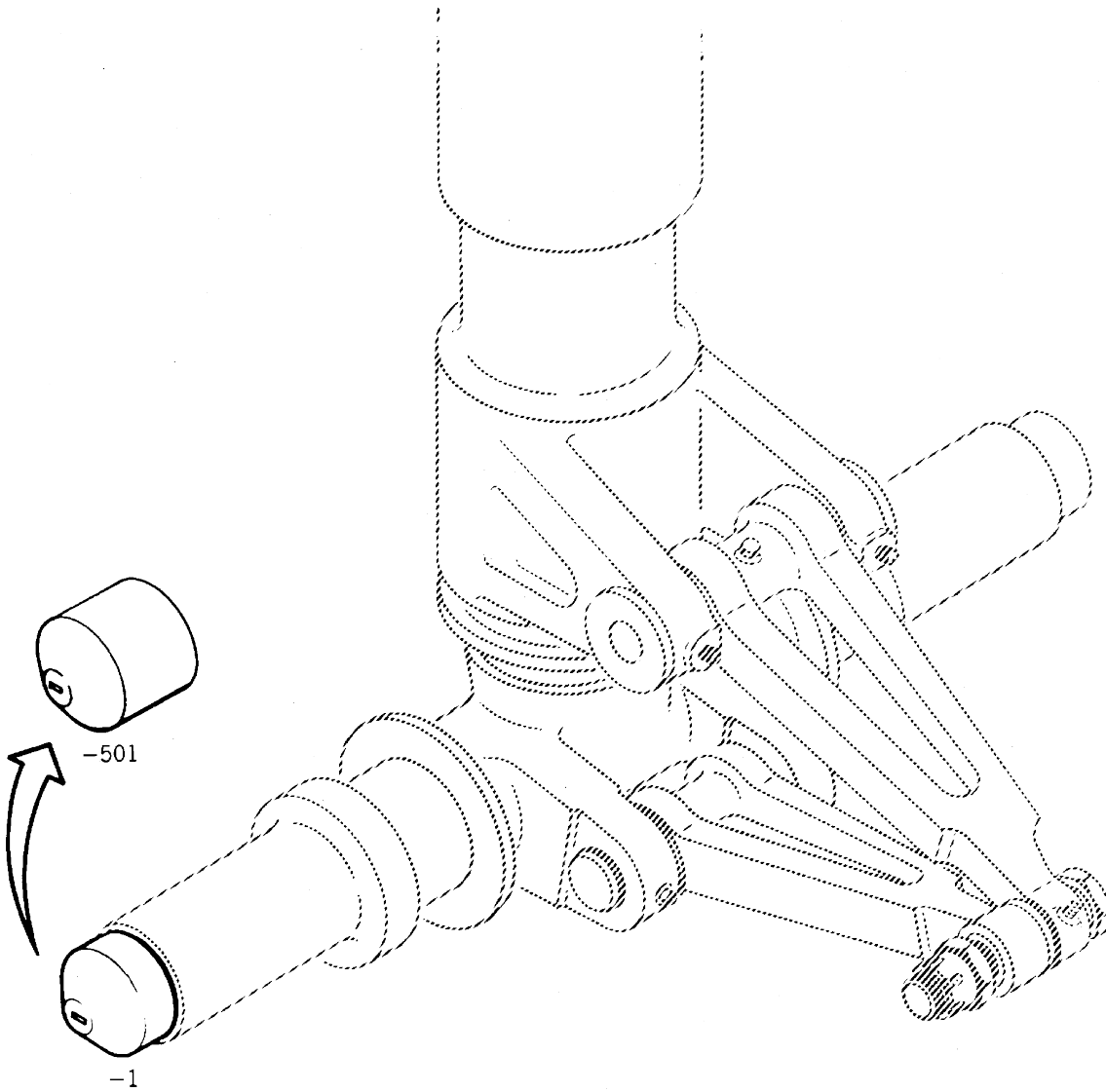
Nose gear Wheel and Tire -- Removal/Installation

Figure 204

AIRCRAFT MAINTENANCE MANUAL

ATTACHMENT

Tool used to protect nose gear axle threads during removal and installation of wheel assembly.
-1 for aircraft without spray deflectors.
-501 for aircraft with spray deflectors.



BBB2-32-299

Nose gear Wheel and Tire -- Removal/Installation

Figure 205