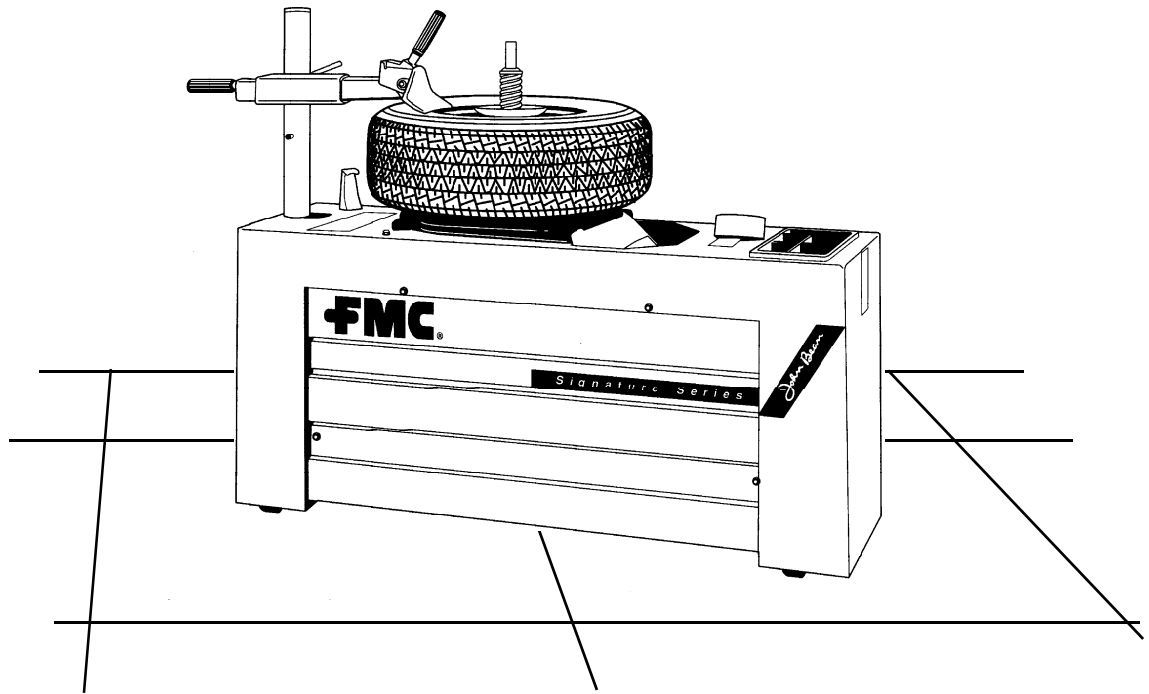


FMC



Model 7600/7700
Tire Changer
Operators Manual

Form 77-4208-3



MODEL 7600/7700 TIRE CHANGER OPERATORS MANUAL

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I. INSTALLATION

1. Remove carton, blocks, and machine protection.

2. Remove tire changer from shipping pallet (optional).

3. Inspect for any possible shipping damage.

4. Connect 3/8" air supply line to 150 psi source. A minimum of 120 p.s.i. (maximum of 180 p.s.i.) is required at machine. Do not place hands near machine, because it will cycle when air is applied. To extend the service life of the air operated components, the addition of a Filter/Oiler is recommended. FMC offers the Air Filter Kit under part no. 66495.

5. Cycle machine and ensure smooth operation in both forward and reverse directions of travel. Check air blast and air inflation operations with deflated tire on the table.

CAUTION: STAND CLEAR OF THE AIR BLAST RING ON THE TABLE IF AIR BLAST CAPABILITY IS BEING TESTED WITHOUT A TIRE/WHEEL OVER IT. THE AIR SYSTEM MAY CONTAIN FOREIGN PARTICLES.

6. Install bracket, Lube Bottle, and Brush. Add approved tire lube mixture to the lube bottle at this time.

7. Check the location of the stub of the center shaft when at rest. It should point to the right-hand corner of the table for operator convenience. It should always return to this location at the end of a complete cycle.

8. Check that standard accessories are on hand. Current list is as follows:

66009 Pin extension weldment

66008 Shaft extension weldment

66181 Dismount boot

66182 Mounting boot

II. BEAD LOOSENING AND DEMOUNTING

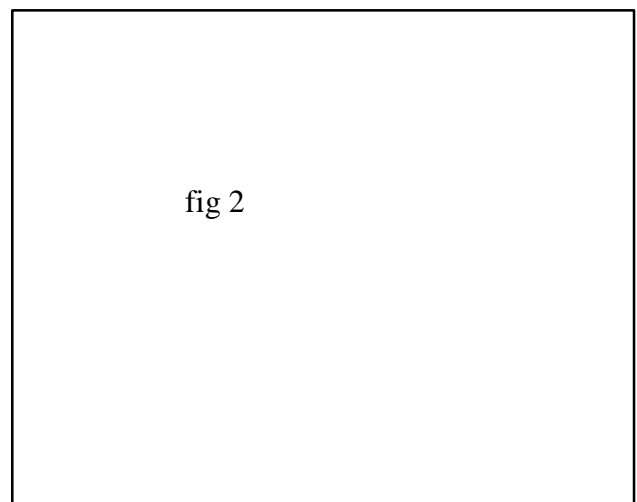
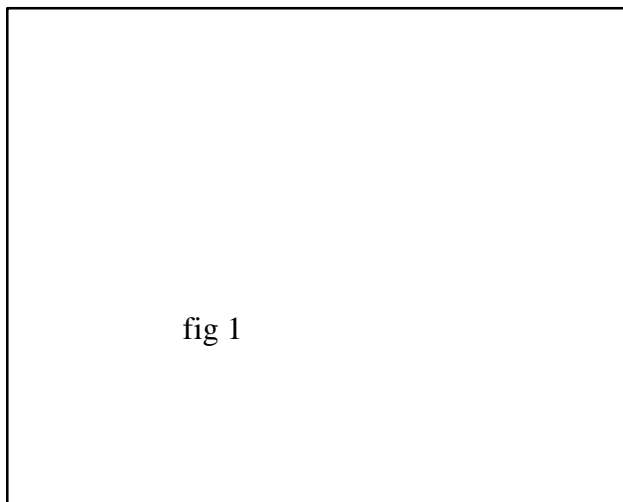
Place the tire and wheel on the conical table with the narrow side of bead seat up and with tire valve located on operator's side of the machine at 6 o'clock. Secure with locator positioning pin. Thread the hold-down cone clockwise on center post. As the tapered end of the cone enters the rim center hole, the wheel will adjust itself onto the conical top. Be sure the hold-down cone is hand tight and is centered in the rim.

Set the adjustable knob under the lower shoe to the correct height according to the label on top of the shoe. On earlier models, insert one of the two buttons in the hole provided under the lower shoe.

Add the lower shoe extension if you are demounting a wheel with deeper than usual drop center. Care should be taken on wheels that have shallow drop center.

With Alloy Wheels, use the Econo-Mag or one of the Mag Cushions to secure the wheel. The hold-down cone centers the wheel. Rubber spacer ring(s) may be necessary for mounting some wheels. Install the cushion between hold-down cone and wheel. Using the air inflation valve, pressurize the tire to 60 psi (pop-off valve will exhaust at 60 psi). The Mag Cushion spreads an equal load over wheel to prevent any breakage. (See note about alloy accessories). To deflate a Mag Cushion, simply attach air chuck and press air release valve.

Remove valve core to deflate tire. Place upper bead breaker approximately one inch away from bead and rim, taking care that the shoe does not contact the rim.



Press down on foot pedal and the upper and lower bead breakers will follow an arc to contact upper bead and loosen it. Simultaneously, the lower bead breaker will rise and loosen bottom bead.

Should upper bead breaker engage rim, stop operation and move bead breaker back accordingly.

After loosening beads, apply a liberal amount of rubber lubricant before demounting tire from rim. The lubricant makes tire removal easier and helps to protect the beads. Lubricant should be used to prevent bead damage during mounting/demounting operations.

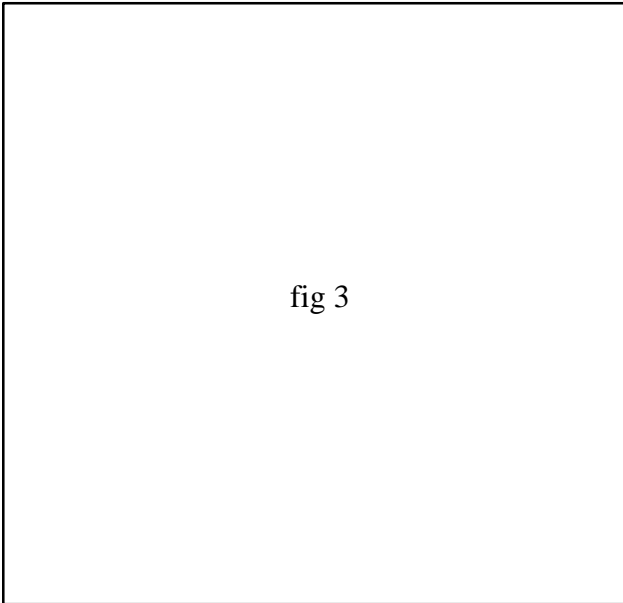


fig 3

Insert combination tool between the upper bead and rim and align tool with centerpost. Place combination tool over the center post and step on the foot pedal. Use left hand to pull up on tire to help remove it from the rim. Center post will power the combination tool, thus removing the upper bead. Repeat for lower bead removal.

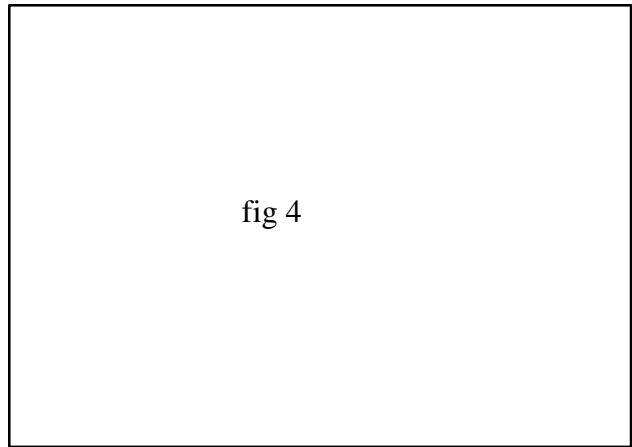


fig 4

CAUTION Stabilize combination tool with Free hand to prevent it from becoming disengaged from the center post and striking operator or bystander.

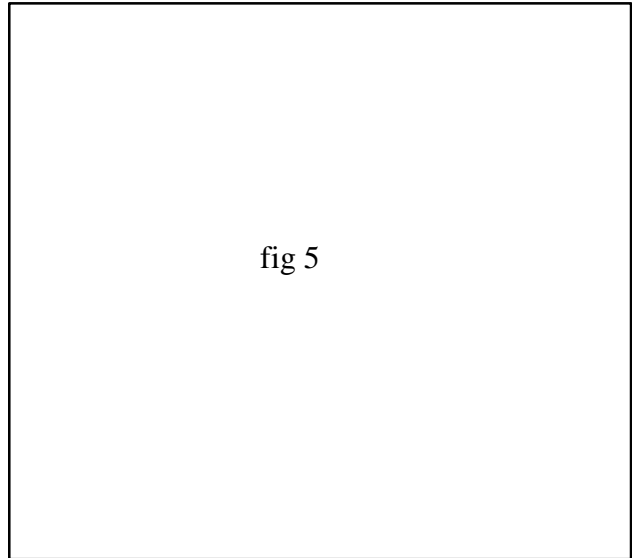


fig 5

Remove tool from center post before releasing foot pedal at the end of each stroke. When handling narrow or wide diameter wheels, limit the stroke to avoid engaging drop center of rim.

The dual power capability of the 7600/7700 is utilized fully when mounting or demounting tires onto or off of standard steel rims.

With the standard steel rims, you can realize the full stroke and power potential of the 7600/7700 in both directions. This feature allows you to work with the tire/wheel on every stroke, thus reducing wasted effort.

Use nylon rim protectors when mounting/demounting Alloy Wheels.

With tube-type wheel, do not extend combination tool any farther than necessary beyond bead.

III. TIRE MOUNTING

Place the wheel on table with the valve stem facing the operator (near 6 o'clock) and centering pin in a lug hole. Secure tire with a hold-down cone or Mag Cushion.

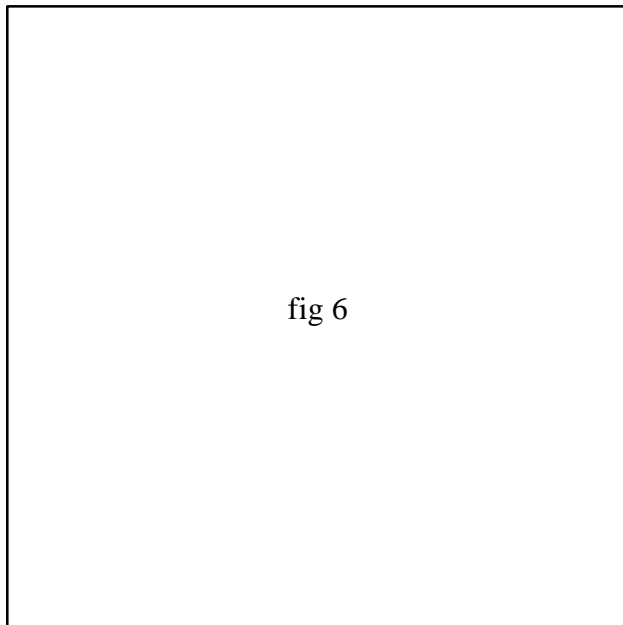


fig 6

Check the height setting of the lower shoe to prevent it from damaging the rim. If your machine has the removable lower shoe feature, you might want to remove the lower shoe during the tire mounting

process. The lower shoe serves no purpose during the mounting of a tire.

Apply a liberal amount of lubricant as the first step in mounting a tire.

Lubrication makes tire mounting easier and helps protect beads. Also, before mounting tire, inspect the rim for damage that could affect bead seating.

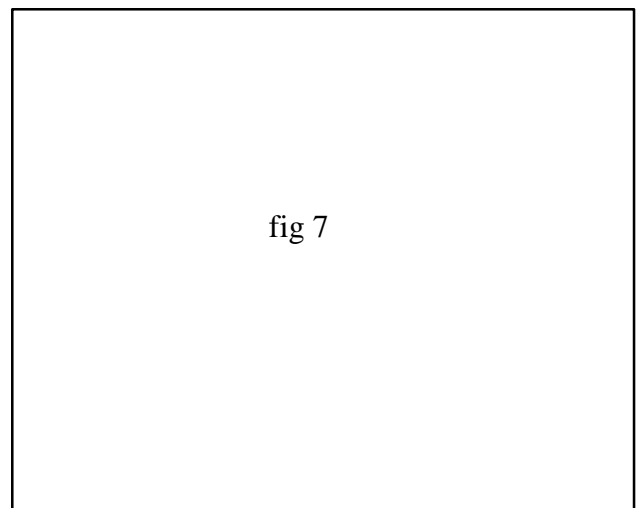


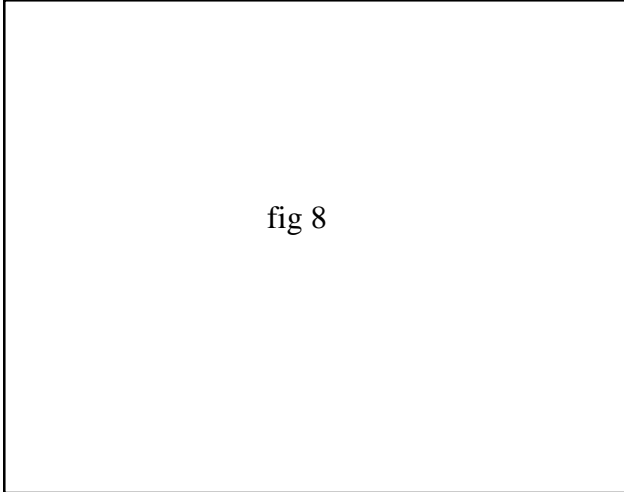
fig 7

Place tire to be mounted over the rim and at angle indicated. Hook the Combination tool over the rim and place slot over the center post. Rotate tire clockwise until the bead is in the groove on the combination tool and the lower bead is in the drop center of the wheel.

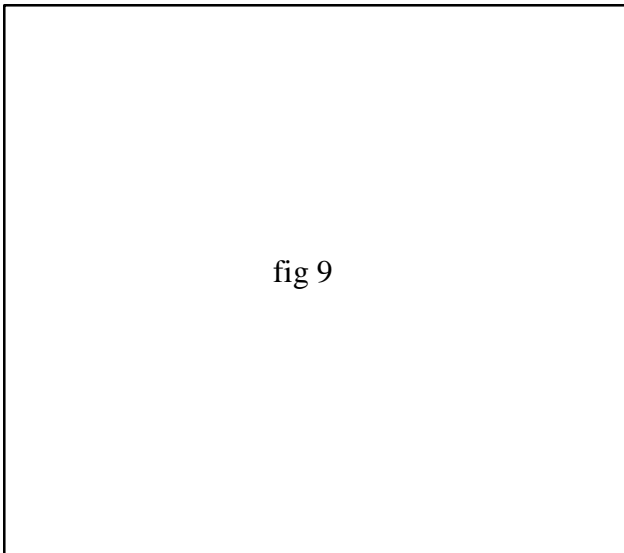
Using your left hand, push down on the tire at the 7 o'clock position and step on the foot pedal. Press down on the right side of the tire with your right hand and release the pedal. With your free hand resting on the combination tool, let the tool rotate and it will install the tire on the rim. Hold your foot on the pedal, remove the tool from the tire, and place it over the edge of the wheel. Double beading tires is not recommended; however, can be done for most tire mounting applications.

IV. TIRE INFLATION

Connect the air inflation chuck to the valve stem with the valve core removed.

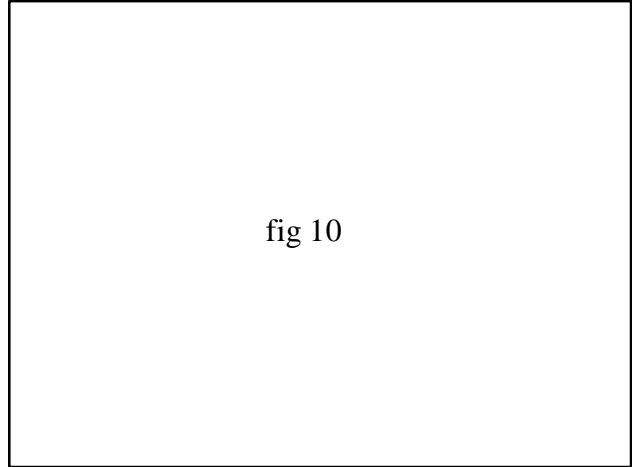


Holding the tire as shown, lift up and rotate so the top bead is against the rim and particularly ensuring the top bead is above the valve stem. Do not hang over the changer. Step on the air inflation pedal to full extent and hold approximately one second. This will deliver a high velocity burst of air from the inflate tube jets, which will seat beads. As soon as beads seat, release the pedal and loosen the hold-down cone.



Remove air inflation chuck and install valve core, then press the foot pedal half way to complete inflation of the tire.

During inflation, frequently release the pedal to read pressure gauge. **DO NOT OVER INFLATE.** If too much pressure is put into the tire, it can be bled down by pressing the relieving valve on operators left.



CAUTION: If beads do not seat at 40 psi, deflate the tire and re-lubricate beads. Do not exceed tire manufacturers recommended air pressure when inflating.

V. SPECIAL WHEELS

The 7600/7700 can easily be set up to handle most specialty wheels and the big GM front-wheel drive cars (Eldorado, Toronado, & Riviera), using accessories that are supplied as standard. The lower shoe angle can be adjusted by simply turning a threaded knob below the shoe.

Earlier models were supplied with two lengths of insertable buttons that raised the lower shoe to different heights - some even earlier units came with a bead loosening shim for use with wide flange alloy wheels.

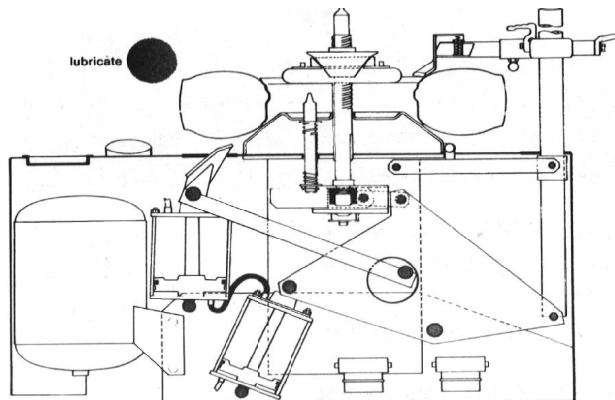
Econo-Mag or Mag Cushion and accessories should be used for holding alloy rims to the changer.

Extensions are also supplied to extend the length of the lower shoe, the height of the center shaft, and the locator pin, Nylon rim protectors are also supplied for use with the combination tool when handling alloy or chrome wheels.

Many other options are available if needed. Consult the Tire Changer Accessory Catalog or contact the nearest FMC sales Representative, Distributor, or Field Service Technician.

VI. MAINTENANCE INSTRUCTIONS

1. LUBRICATION - periodically remove the side panels and lubricate pivot pins, & rack and pinion.



The recommended greases are:

Franklin Oil Corp MTS-1000

Franklin oil H-80 Moly grease

Dow Corning MolyKote 165 open gear lube

Dow Corning MolyKote 299 open gear lube

Dow Corning MolyKote G-Plus paste

Dow Corning MolyKote G paste

2. LOWER SHOE - If equipped with a removable shoe, inspect the condition of shoe retaining parts. Replace as necessary.

3. CYLINDER OIL - Stroke of lower bead breaker should be 6-1/2". A shorter stroke may be due to a loss of hydraulic oil (the power transfer fluid enclosed between the two cylinders.) Should hydraulic oil appear around the valve assembly, contact your service rep. or cylinder repair. Otherwise, hydraulic oil can be added to the system through the "T" plug on top of the lower cylinder. Hydraulic oil must be non-foaming and non-detergent. The following is a list of preferred oils:

Esso Univis H42

Exxon Univis P32

Exxon Univis J26

SunOil 2105

Mobil Oil D.T.E. 25

4. AIR VALVES AND HOSES - Inspect periodically for air leaks and for presence of water or hydraulic oil. Contaminates in the air system will, if left undetected, tend to cause "O"rings and valves to deteriorate.

5. LOSS OF POWER - Check:

(a) Air supply - should be 150 psi through 3/8" line.

(b) Air lines for obstruction or leak, or air cylinders for leakage.

(c) Air valves and mufflers (on 4-way valve) - should be functioning properly with no restrictions. Clogged mufflers will

cause a restricted air system, thus slow the machine down and eventually stop it. Replace as necessary.

WARNING: Tire or wheel failure under pressure can be hazardous. Inspect tire and wheel carefully for wear or defects before seating or inflating. Never inflate tire beyond the tire industry recommendation of 40 psi. Always lubricate with approved rubber lubricant and never damage tire beads. Keep hands and entire body back from inflating or inflated tire.

1. Never stand with any part of the body over a tire during the inflation process.
2. Before starting, release all air from the tire.
3. Place rim with narrowest bead-seat or flange up.
4. Position tire with valve directly in front of operator.
5. Hand tighten hold-down cone over adapter before breaking bead - mounting or demounting.
6. Use approved lubricant on all beads before breaking over or seating beads.
7. On air inflate unit, depress foot pedal only when seating or inflating tire.
8. Loosen hold-down cone one full turn immediately after obtaining initial bead seat, and before attempting further inflation.
9. To seat beads, use a small amount of intermittent air. Never exceed 40 psi.

10. During inflation, frequently observe pressure at air gauge and avoid distraction to prevent over-inflation.

VII. Specifications

Rim Diameter:

11.0 - 17" (254-455mm)

Rim Width:

3.0 - 19.75" (76-483mm)

Air Supply (operating range:)

120 - 180 PSI (825-1 238kPa)

Center Post Torque

450 ft. lbs @ 120 psi

650 ft. lbs @ 175 psi

(62kgm@825kga, 90kgm @ 1205kPa)

Cylinders:

Two 7" diam. x 6.5" stroke

(177.9mm x 165.1mm)

Surge Tank:

(ASME approved): 10"diam. x

18.75"high (254mm x 476mm):

0.75 cu ft. (21.25L)

Cycle Time:

6 seconds (complete forward and reverse stroke)

Forward & Return Power

Air-hydraulic

Mount & Demount Capability

Both forward and reverse strokes

Unit Dimensions:

22" x 54.5" x 44"

(0.53m x 1.38m x 1.11 m)

Shipping Volume:

39 cu ft (1.1m³)

Shipping Weight:

500 lbs (225kg)

NOTE: FMC Corporation reserves the right to incorporate changes in designs or materials, affecting product improvements, without obligation of incorporating same on equipment of prior manufacture.

7600/7700 Troubleshooting Chart

<u>Symptom</u>	<u>Possible Causes</u>	<u>Action</u>
1. Stroke becoming slower	Clogged mufflers or 4-way valve Restricted air line Low air supply pressure Leaking dump valve	Replace mufflers - clean 4-way valve Clean out or replace Check compressor & supply line Replace
2. Decreased shaft power in both directions	Air line leak to 4-way valve input Defective "O" rings in 4-way valve Defective 4-way valve Leaking dump valve Defective pop off valve Air in hydraulic system	Repair fitting/replace line Replace rings or 4-way valve Clean, rebuild or replace Replace Replace & check air pressure Call for Service
3. Decreased power in forward stroke only	Clogged muffler in lower cyl exhaust path. Defective "O" ring in 4-way valve Leak in air line to lower cylinder Defective "O" ring cap seal on cyl.	Replace mufflers Replace rings or 4-way valve Repair fitting/replace line Call for Service
4. Decreased power in reverse stroke only	Clogged muffler in upper cyl exhaust return. Defective "O" ring in 4-way valve Leak in air line to upper cylinder Defective "O" ring cap seal on cyl.	Replace mufflers Replace rings or 4-way valve Repair fitting/replace line Call for Service
5. Decreased stroke (shaft travel)	Low on hydraulic fluid Leak in hydraulic pressure hose Defective "O" ring cap seal on cyl. Air in hydraulic system	Add hyd. fluid at upper cylinder Tighten clamps or call for service Call for Service Call for Service
6. Center shaft & cylinders will not move	Lost hydraulic fluid Defective Hydraulic pressure hose Defective cylinder cap "O" ring	Call for Service Call for Service Call for Service
7. Center shaft will not rotate, but breaker operates normally.	Broken center shaft Defective pinion gear Defective rack wear pad	Replace center shaft, nyliner, DU Replace pinion gear, pin or both Replace rack or wear pad
8. Center shaft loose	Worn our DU bearing Worn out Nyliner bushing Badly worn pinion gear Badly worn rack	Replace DU bearing Replace Nyliner bushing Replace pinion Gear - check wear pad Replace rack - check pinion
9. Lower shoe "creeps up" after normal stroke	Air in hydraulic system	Call for Service