

JORDAN SPREADER

Operating Instructions, Parts and Diagrams



Photo used with permission Peter Arnold

From the FRRS archives

INSTRUCTIONS

for

Operating and Maintenance

JORDAN

TYPE "A" MACHINES

MODEL No's. 3-175, 3-200

IMPORTANT

Every machine is inspected thoroughly before leaving our plant and is shipped in perfect order. In case of foreign shipment the machine is completely built and tested, properly boxed and crated for export, with detail erection and assembly drawings accompanying the shipment. If properly assembled and cared for, it will give many years of satisfactory service. Keep it in good order at all times. Should any defect develop, it should be eliminated as soon as possible. When replacements of worn or broken castings or other parts are necessary, address your orders to the O. F. JORDAN COMPANY, East Chicago, Indiana, U.S.A. specifying plainly the catalog number, quantity required, if right or left hand, and give serial number of car which appears on company name plate. We make immediate shipment on all standard parts.

O. F. JORDAN COMPANY
East Chicago, Indiana
U. S. A.

* * * * *

INSTRUCTIONS

for

OPERATING TYPE A SPREADER-DITCHER

To have the car ready for operation proceed as follows:

IF LOCOMOTIVE IS EQUIPPED WITH SPECIAL AIR LINE, connect the special air hose at the rear end of the car on left side to the air line leading to the main reservoir on the locomotive.

Turn on the special angle cock handle. This will connect the main reservoir to the special air line on the car.

IF LOCOMOTIVE IS NOT EQUIPPED WITH SPECIAL AIR LINE, the regular train line is to be used for supplying compressed air to the tank on the car. Cut out brake reservoir from train line when air for the reservoir is being supplied through train line. Failure to do this will set the car brakes when the air is applied to operating cylinders.

Train line pressure must be raised to at least 90 pounds for successful operation.

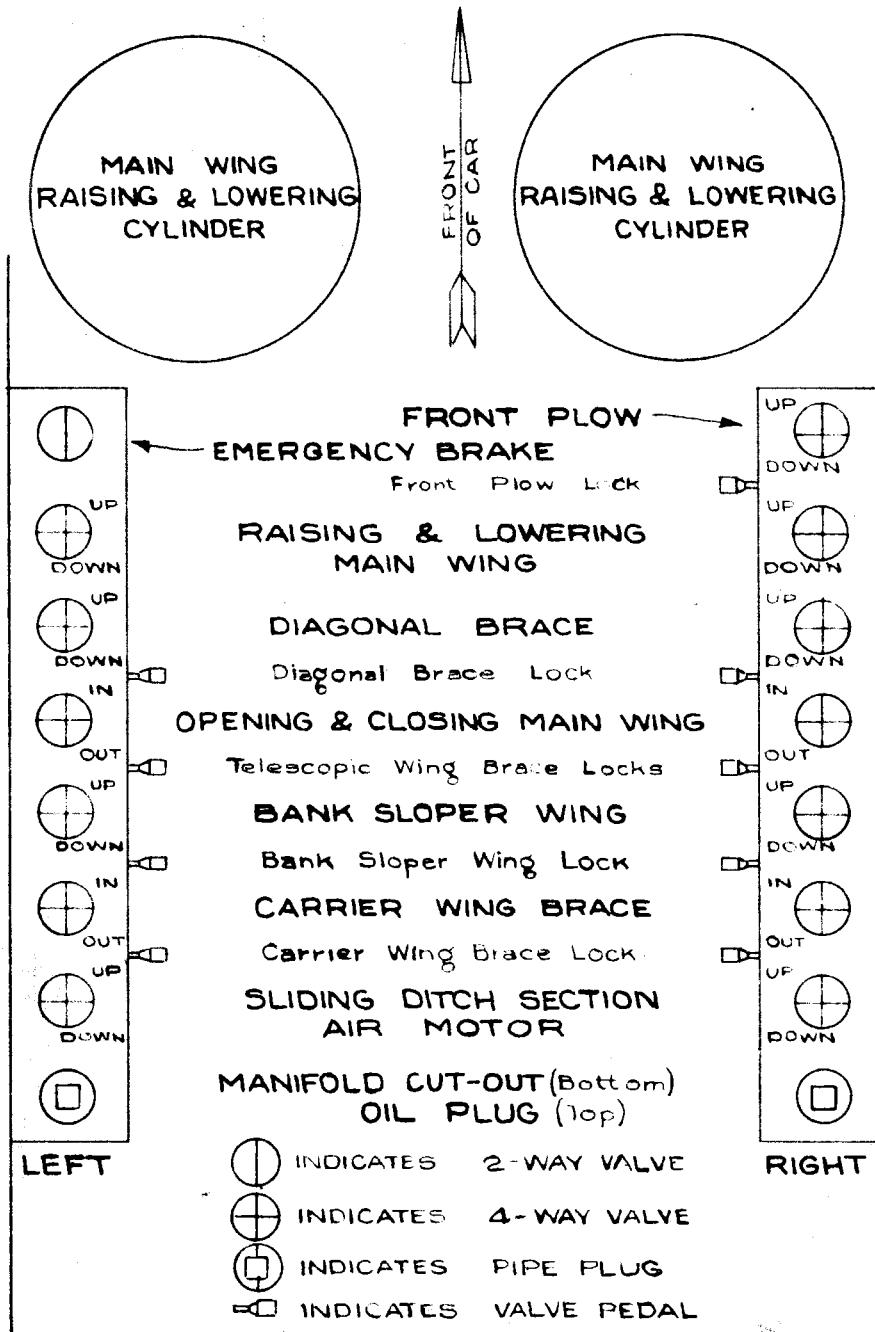
In case of either locomotive equipment, turn on the cut-out valve at the horizontal air tank on the car. Now air is being conveyed from the locomotive into the air tank on the car and an air pressure gauge installed in the cab will be found registering the increasing pressure in the tank.

The air tank is constructed for 125 pounds per square inch working pressure, however; in most cases, a lower pressure is sufficient for successful operation. To drain air reservoir, open drain cock at bottom of air reservoir.

OPERATING MANIFOLD

Look over all operating handles in the cab on both sides and see that they are all in neutral position. In other words see that all air cylinders on the machine are cut off from main air line. Turn on the cutout valve located in the cab at the floor, near the rear end of manifolds, this allows the air to come from the main air reservoir, located underneath the cab, to the individual operating valves. This is to be done on the side which is intended to be worked or on both sides, if both sides are to be ready for operation.

Used on type A Model #3-175, 3-200
 First used on Car Serial #760
 Last used for short wing frame on Car Serial #822



On each side in the cab and within easy reach, there are installed valves controlling various features of the machine as shown on the accompanying diagram.

Whenever necessary make use of signal cord suspended under the ceiling of the cab and attached to the whistle on outside of the cab.

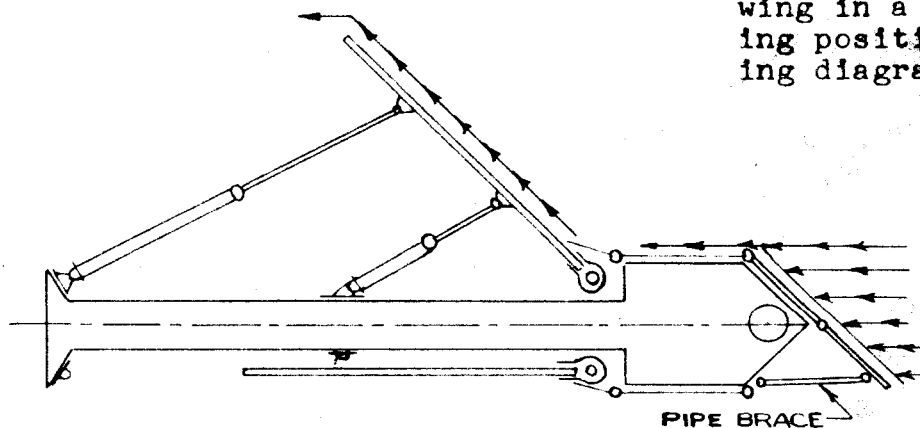
A conductor's valve for applying the train brakes is also placed at convenient point on the left manifold.

When the machine has arrived at the place where it is to work and the train is brought to a stop, the following should be done:

PLOW

Adjust plow cutting shoes which are to slide over the rail to the depth required. To do this remove two wedges at the outer end of front plow, open the wing and adjust 2 bolts holding each rail shoe, using plates of suitable thickness.

To spread material from one side of the track to the other, open plow wings and insert the pipe braces in position to hold the wing in a continuous cutting position. (See following diagram.)



Used on Type A Model #3-175, 3-200
First used on Car Serial #760
Last used for short wing frame on Car Serial #822

When the left plow wing is to be used, and before opening it, the air hose and vertical pipe must be taken out of the way either by swinging it upwards or by disconnecting it at the first union. Remove 2 safety bolts at the rear end of the plow side wings, i.e. disconnecting the plow side wings from the main wings. Now the machine is ready to apply air to the plow cylinder which can be done from right hand manifold in the cab. Turn the handle in direction indicated "Up". This will raise the plow and release the weight of it from the two safety pins supporting the crossbar.

Remove the two pins and insert them in corresponding holes that will permit the plow to lower until the rail sliding shoes are about to touch the rail.

Release the two safety chains at the back of the plow side wings and adjust them to the depth required.

TO LOWER THE PLOW, press foot on plow valve pedal to withdraw stop or lock pin, locking the cross bar, and turn the valve handle at indication "Front Plow" slowly to the direction indicating "Down". The plow may be lowered to any desired depth.

TO RAISE THE PLOW, press the valve pedal, turn the plow valve handle to the direction indicating "Up" and when the plow has reached the highest position, release the foot valve pedal, then lower plow slowly by releasing the air from plow cylinder until full weight rests on pin and turn valve to neutral position.

Care should be taken to see that the stop or lock pin is fully inserted under the crossbar. Use safety pins when car is in transit or plow is not operated.

TO OPEN AND CLOSE WINGS

GEAR RACK TELESCOPIC BRACES

Braces are locked at all times when foot pedal valve is released. Therefore, to move and adjust wings to working position, first step on foot valve pedal to release locks on "Gear Rack Telescopic Braces". Keep foot on pedal until wing is in desired working position.

DIAGONAL BRACE

With one foot on the wing lock pedal valve and the other foot pressed down on valve pedal to release lock block on diagonal brace, then turn diagonal brace valve handle in the direction "Up". When the wing is raised above its safety rest on the side of the car, then move opening and closing valve handles in the direction "Out". This will open the wing at any desired spread.

At the same time the telescopic wing braces will be unlocked and pulled out. Release diagonal brace valve and when diagonal brace is lowered to proper operating position, remove foot from foot pedal valve on diagonal brace which will lock diagonal brace in that position.

OPENING AND CLOSING WINGS

As mentioned in preceding explanation, first step on wing brace foot lock pedal, then turn the folding cylinder valve in the direction of "Out". This will open wing.

Important when wing is opened, reverse wing folding cylinder valve slightly to release the pressure in the folding cylinder. Avoid any attempt to raise or lower wings they are being opened or closed.

To close wings, the above operation is reversed. Also before attempting to close wings care must be taken to see that they are raised to their full height on the main post, diagonal brace and bank sloper wing. Failure to do this may cause damage to the wing braces. Also see that gear lock blocks on wing braces are released before attempting to open or close main wings.

RAISE AND LOWER MAIN WINGS

Turn the valve handle operating the main cylinders in direction "Up". This will permit releasing of the two pins supporting the main wings at the main posts. Withdraw the pins and insert one of them in a hole below to correspond with the depth of spread desired. Use of both pins is necessary when the car is in transit.

To lower the main wing turn the valve handle in opposite direction slowly until the wing reaches working depth. To raise the wings reverse the operation.

DITCHING ATTACHMENTS

Ditching machines are constructed identically with the straight Spreaders. They have all above mentioned features and in addition are equipped with the following attachments:

Bank Sloper
Air Operated Carrier Wing Brace
Adjustable Ballast Section
Mechanically Operated Ditch section

BANK SLOPER

The bank sloper is connected to the main wing and can be lowered or raised by means of an air cylinder, located on the main wing. It can be locked in any position by means of a pneumatic lock pin. To raise the bank sloper, press foot down on bank sloper valve pedal to withdraw bank sloper lock pin and turn the valve handle marked "Bank Sloper" in the direction "Up". As soon as weight is taken by piston the lock pin will be forced out and the bank sloper can be raised or lowered to any desired position. To lock the bank sloper in any position, release the valve pedal and the lock pin will be forced into a hole in bank sloper.

To operate bank sloper wing up and down without too much wing distortion, place bank sloper wing in half way position before wing braces are locked.

BANK SLOPER IN CARRY WING FORM

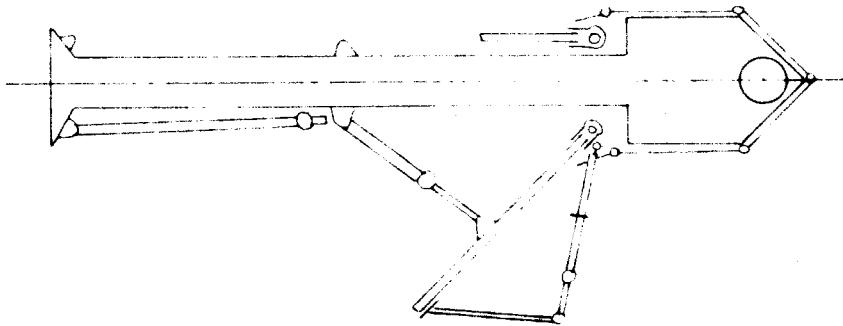
The same wing can be used for carrying material from cuts. To change to the carry wing or bank sloper wing to drag form, when main wing is in closed position, disconnect rear brace from bank sloper and chain rear brace to bank sloper rest on car body. Open main wings in usual manner, lower sloper wing to level position and lock with pneumatic pin.

Disconnect bank sloper cylinder connecting rod at bank sloper wings and pull the connecting unit up on the template wing. Remove 1-1/2" bolt extending through the hinge and bank sloper wing, swing bank sloper or carrier wing around parallel with the car. Remove air operated carry wing brace from its rest by means of block and tackle furnished with machine. When this brace is lowered and in line with carry wing which has been swung around parallel to the car, step on foot valve marked "Carry Wing Brace", move carry wing brace valve around in direction of "Out" and connect the extended position of air operated carry wing brace to bank sloper wing.

The carrier wing hook which extends through the main template wing will catch the wing and hold it in place, when wings are folded to side of car.

To open wings, first release the carrier wing hook and continue as described under "Opening and Closing Wings".

The following sketch illustrates how the wings will look when opened in carrier wing form:



To convert the machine back in spreading and ditching form reverse operation.

IMPORTANT

Do not ship machine in carrier wing form.

ADJUSTABLE BALLAST SECTION

Adjustable ballast section is being used principally in skeletonizing track and in any other spreading. Adjustable ballast section is pivoted at the toe of the ballast shoulder and can be adjusted to various depths by means of bolts.

MECHANICALLY OPERATED DITCH SECTION

TO LOWER THE BOX DITCH SECTION, turn the valve handle at indication "Ditch Section" from its neutral position to the direction indicating "Down". The air motor located on the back of the wing will actuate the screw drive and ditch section will gradually descend to any desired depth.

TO STOP THE AIR MOTOR, turn the valve handle back to neutral position.

TO RAISE THE DITCH SECTION, turn the valve handle to the direction indicating "Up". The motor will turn in the opposite direction and raise the ditch section to any intermediate position or up to its maximum, thus transferring the ditcher wing into a straight spreader wing.

GENERAL INSTRUCTIONS

All drains in air lines and reservoir must be opened occasionally to allow accumulated water to drain off. Particular care of this should be taken when machine is being used in cold weather.

The moving parts of the Type A machine are heavy and must be operated slowly at all times to prevent damage to the machine and to the track in case of derailments or otherwise.

Do not do too much spreading or ditching at one movement, especially when in heavy material. The machine will last longer and do better work if not overloaded.

When it is necessary to work around wings, braces or front plow, in the open or down position, first place them in the desired position. Then either allow wings to go down until they rest on the ground or else block them securely so that there is no possible chance for them to drop or swing in. Never allow air in any cylinder supporting a part that will move while working about machine.

When machine is travelling over road, even for short distances, the pins supporting the main wings and the front plow must be in holes, and safety chains at the rear of plow side wings must be pulled tight to prevent the above parts from dropping.

Main wings must rest securely in hooks or wing rests located on side of car and diagonal brace must be locked by the pneumatic pin.

O. F. JORDAN COMPANY
East Chicago, Indiana
U.S.A.

LUBRICATION INSTRUCTIONS
FOR
JORDAN SPREADERS-DITCHERS-SNOW PLOWS

Always be sure the gear racks of the main wing telescopic braces are kept absolutely free of oil or grease. Clean periodically of accumulated dirt. Keep air lock cylinder packing glands snug to prevent oil or grease dropping onto the gear racks.

Oil, grease, or dirt on the gear racks will result in the braces slipping, causing serious damage to the wing.

At the start of each days work remove plugs at the rear end of the manifolds. Pour about 1 pint of a good grade of engine lubricating oil and replace plug, and turn air into manifold. Move each valve handle back and forth. This will blow oil into each operating cylinder.

In temperatures above freezing a #20 or #30 S.A.E. grade oil is satisfactory.

The following parts should be lubricated with a heavy cup grease preferably heated to a liquid state, and poured or brushed on.

Stationary post channel guides of the Standard and Road-Master Type Models.

Stationary post column of the Type A Models, using lubricating plug on Sliding Post Assembly.

Plow Slides and Guide Castings of Standard Type Models with High Snow Plow Attachment.

Cables and Sheaves of Front Plow, preferably brushed on the cables. Bank Sloper Wing Operating Cables and Sheaves if a Standard or Road-Master Model.

Hinge Pins connecting Main Wing Hinge to Slide Post Hinge Butt on Standard and Road-Master Models.

Coupler Cover plate guide bars on Standard Model with High Snow Plow Attachment.

Grease Cups on Sliding Ditch Section of Type A Models equipped with Air Motor.

Inside all Gear Rack Brace Pinion Gears and inside large pipe of Main Wing Braces. These points are well lubricated at time of construction and little maintenance is required.

ROLLERS ON SLIDE POST OF STANDARD AND ROAD-MASTER MODELS. Lubricate as required when the JORDAN is in use, with a good grade of engine oil.

All piston rods of operating cylinders.

Universal Joints of Main Wing Gear Rack Braces, and Folding Cylinder, also Diagonal Brace Universal Joint connection at Sliding Post on Standard and Road-Master Models.

All air valves.

Rollers on Slide Posts of Standard and Road-Master Models.

Crosshead Guide and Guide Beam of Bank Sloper Cylinder on Type A Models.

Trucks to be lubricated in accordance with the standard practiced by the railroad. Friction side bearings and truck center castings should be kept well greased at all times. Late Type A Models have a lubricating plug on front deck to reach the truck side bearings.

At the end of each days work be sure to drain all water from the main reservoir.

When car is to idle for a considerable period of time be sure all exposed piston rods of operating cylinders are coated with a neutral grease.

WINTER LUBRICATION

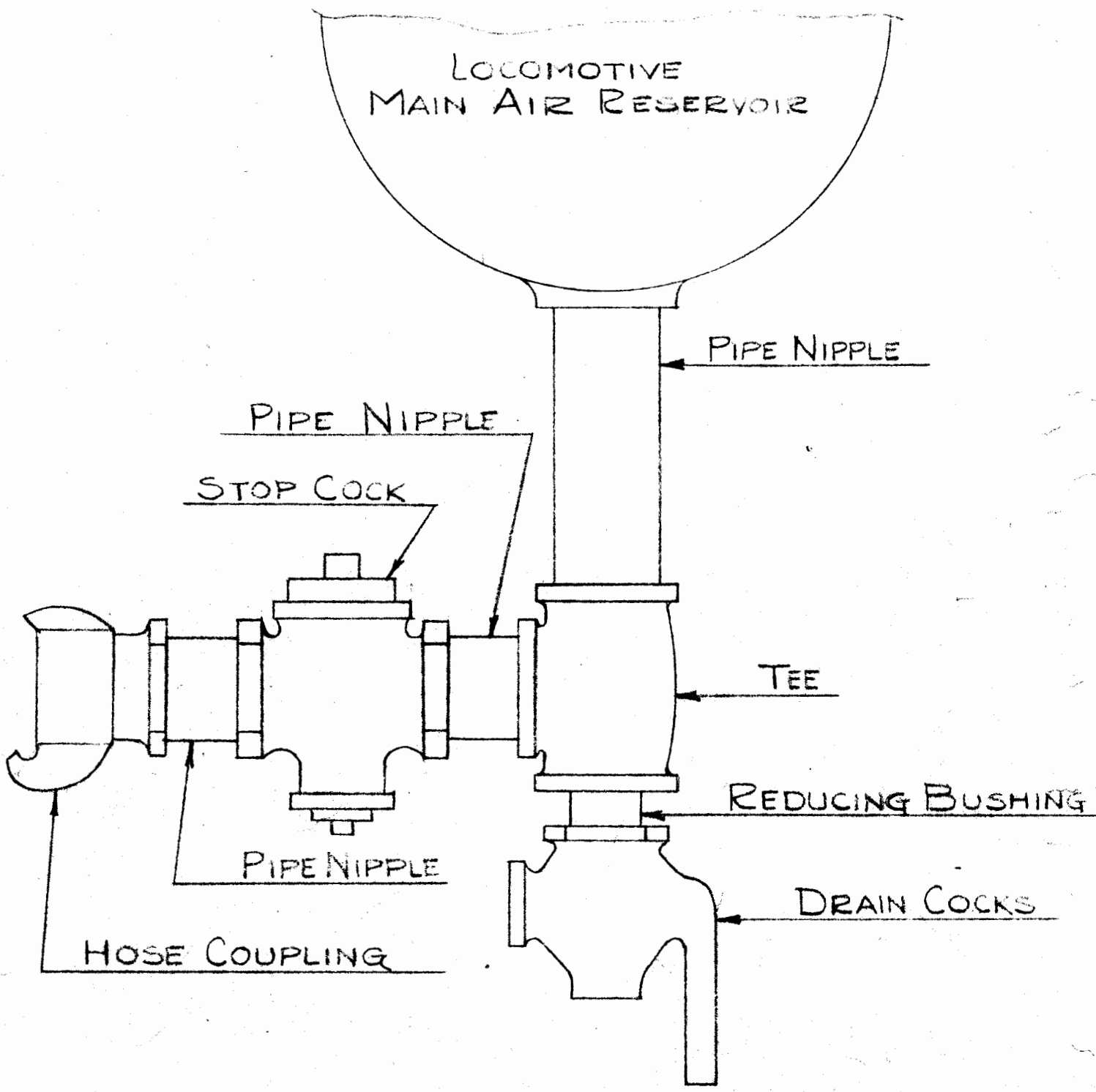
Where temperatures below freezing are expected, pour 1 pint of alcohol in each manifold lubricating plug, before turning air into the car from the locomotive. Allow a few minutes for alcohol to flow into the main reservoir. Alcohol fumes will prevent frost forming in air lines and cylinders. Follow with a very light grade of engine lubricating oil, preferably S.A.E. #10 and lubricate valves and cylinders as noted in second paragraph.

Alcohol will not effect packing or packing cups in the cylinder if a lubricating agent is used.

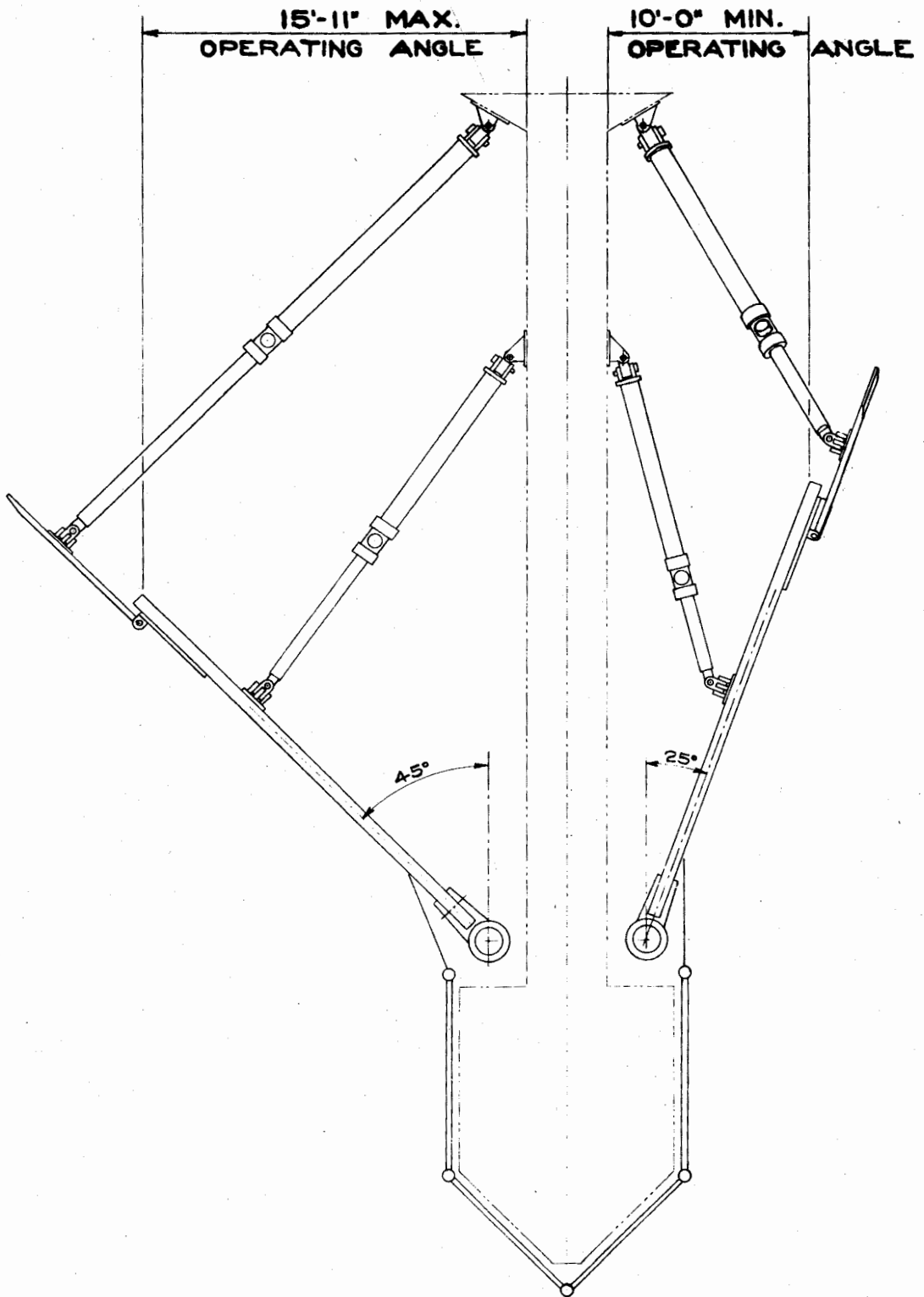
BY DATE 9-21-51
CHKD. BY DATE

SUBJECT METHOD OF ATTACHING
AIR HOSE TO LOCOMOTIVE
AIR RESERVOIR

SPECIAL SHEET NO. OF ...
JOB NO. FOR STD. & TYPE
REPAIR PARTS LIS



O. F. JORDAN CO.
EAST CHICAGO, INDIANA

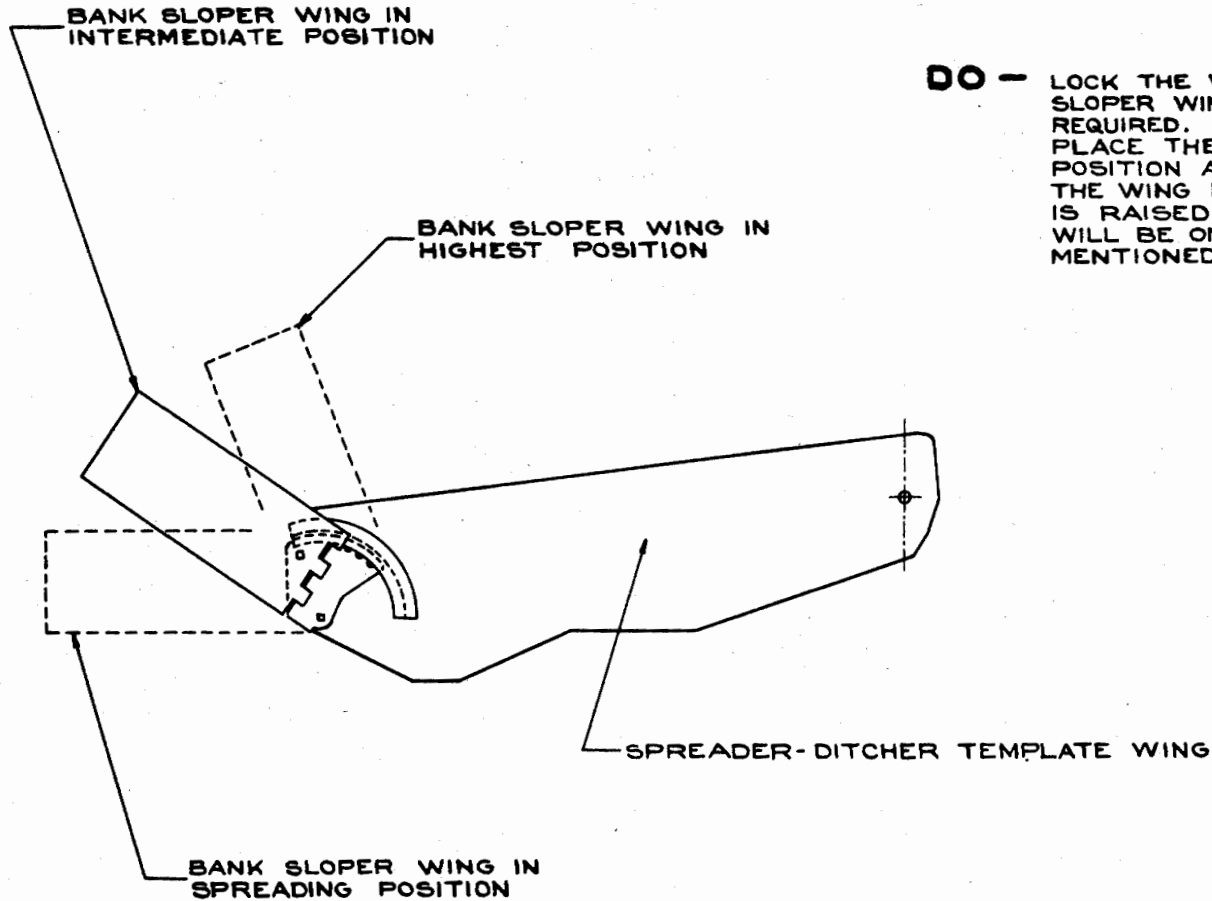


O. F. JORDAN CO.
 EAST CHICAGO, - INDIANA
MAXIMUM AND MINIMUM
WING OPERATING ANGLES
 FOR
TYPE "A" CAR
MODEL 3-175 & 3-200
 SCALE _____ DRWG. NO. _____
 DATE MAY 7, 1951
 DRAWN BY S. K. **3434**

WHEN OPERATING BANK SLOPER WINGS

DON'T - LOCK THE WING BRACES WHEN BANK SLOPER WING IS IN THE UP POSITION, IF BANK SLOPER IS TO BE LOWERED BECAUSE THE WING BRACE PUSHES THE BANK SLOPER OUTWARD AND DAMAGE TO THE HINGE MAY OCCUR.

DO - LOCK THE WING BRACES AFTER THE BANK SLOPER WING IS POSITIONED FOR THE SLOPE REQUIRED. IF THIS IS IMPRACTICAL, THEN PLACE THE BANK SLOPER IN THE HALF WAY POSITION AS SHOWN IN THE SKETCH AND LOCK THE WING BRACES. NOW IF THE BANK SLOPER IS RAISED OR LOWERED THE WING DISTORTION WILL BE ONLY HALF AS MUCH AS THAT MENTIONED ABOVE.



REVISIONS		
DATE	LOC.	WAS

O. F. JORDAN CO.
EAST CHICAGO, INDIANA

**BANK SLOPER WING
OPERATION**

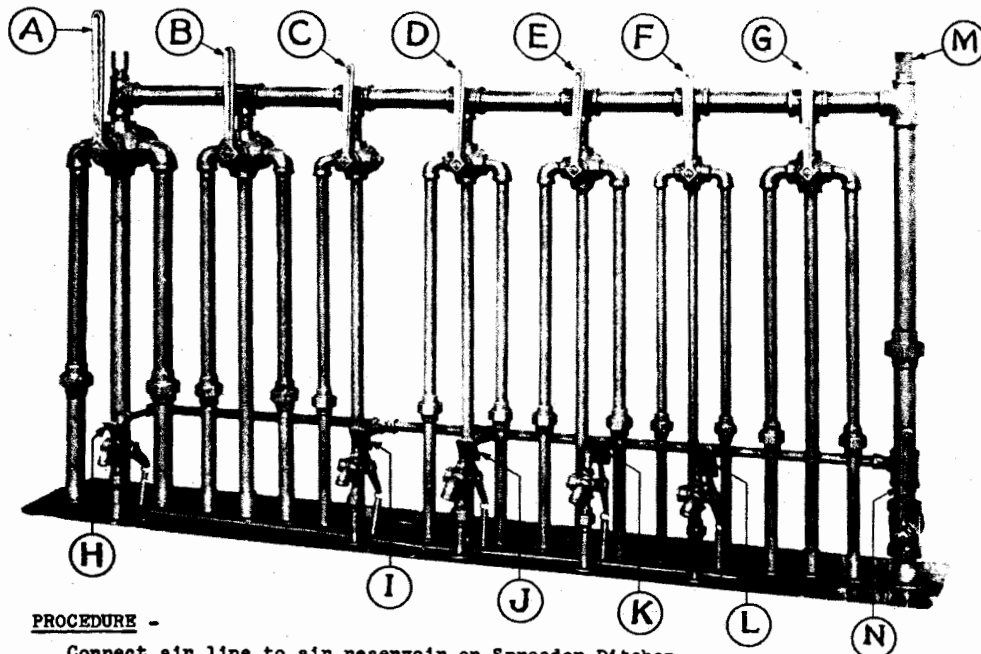
SCALE
DATE NOV. 30, 1948
DRAWN BY S. K.

DRWG. NO.

3132

OPERATING INSTRUCTIONS

FOR
TYPE A JORDAN SPREADER-DITCHER
WITH
GEAR TYPE TELESCOPIC BRACES



PROCEDURE -

Connect air line to air reservoir on Spreader-Ditcher.
See that all operating valve handles are in neutral position.
Remove all safety rods and chains.

TO OPERATE FRONT PLOW -

Move valve handle (A) to "up" position.
Step on foot pedal (H) to release lock.
Remove adjustment pins and insert in holes for desired flanging depth.
To lower plow, move valve handle (A) to "down" position.
When crosshead reaches adjustment pins, move valve handle (A) to neutral position.
To raise plow, reverse operation.

TO OPEN SPREADER-DITCHER WINGS -

Move valve handle (B) to "up" position.
Remove adjustment pins from under crosshead and re-set pins in holes for desired depth of cut.
Step on foot pedal valve (I) and (J) and move valve handle (C) to "up" position.
Move valve handle (D) slowly to "out" position when desired wing operating angle is reached, slightly reverse valve (D) to cushion air in cylinder then return to neutral position.
Move valve handle (C) to "down" position when desired wing slope is reached, remove foot from foot pedal (I) thus locking diagonal brace.

TO SET BANK SLOPER WING -

Step on foot pedals (J) and (K), move valve handle (E) to "down" position and release foot pedal (K) when bank sloper wing reaches 45° position, return valve handle (E) to neutral position.

MAIN WINGS -

Move valve handle (B) to "down" position, lowering main wing approximately 8", then release foot pedal (J) which locks wing braces.
Main wing can now be raised and lowered also bank sloper wing set at various operating slopes.

TO OPERATE SLIDING DITCH SECTION -

Move valve handle (G) to lower and raise ditch section.
When not in operation, always raise ditch section.

TO CLOSE SPREADER-DITCHER WINGS - Reverse above operations.

CARRIER WING FORM -

With main wing closed, disconnect rear wing brace, apply brace safety chain.

Open main wing, lower bank sloper wing to level position and lock, disconnect operating cylinder.

Remove bolt holding bank sloper wing to pivot hinge and swing forward.

Remove safety chain, and by means of block and tackle remove carrier wing brace and connect to bank sloper wing.

Step on foot pedal (L) to release lock and move valve handle (F) to open and close carrier wing to desired position, leading slightly into bank.

GENERAL INSTRUCTIONS -

Emergency brake valve is located in same position as valve (A) in left hand manifold.

Remember main wing braces are locked at all times when foot pedals are released.

Keep all moving parts well greased except gear rack on telescopic wing braces.

To oil air cylinders, turn outout cock (N) to cut air out of operating manifold. Remove oil plug (M), pour in half pint of light oil, replace oil plug. Turn air into manifold, give each valve a quick turn so a small amount of oil is sprayed into each air cylinder.

Keep all bolts tight, renew cutting shoes before excessive wear occurs.

For complete operating instructions and Repair Parts List, write O. F. Jordan Co., East Chicago, Indiana, giving machine serial number.

Suggestions from operators always welcomed.

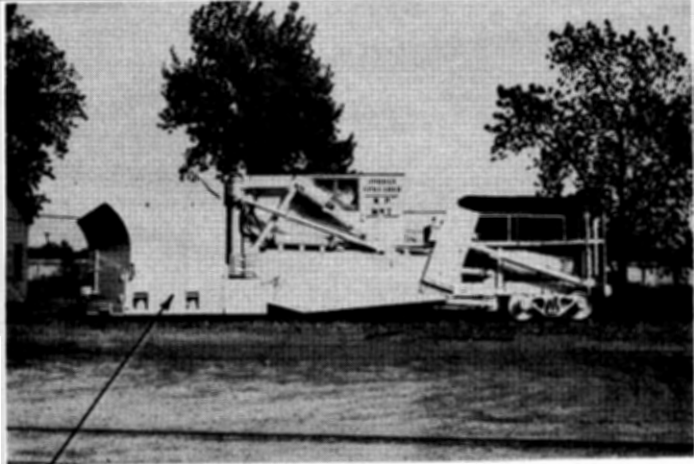
CAUTION

Do not operate Spreader-Ditcher wings at a lesser angle than 25° out from car body.

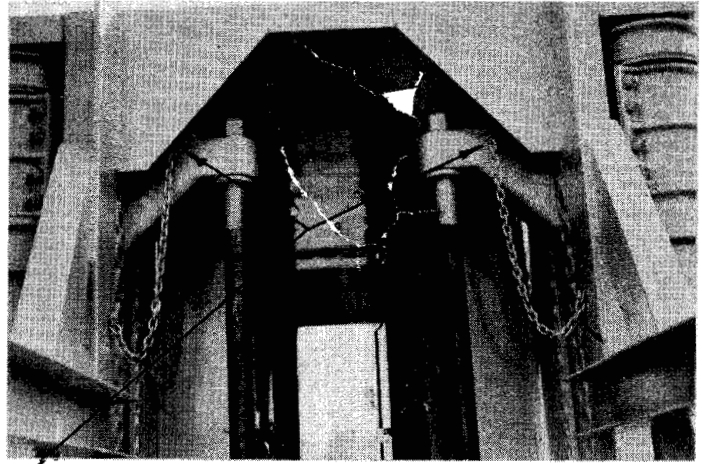
O. F. JORDAN COMPANY
EAST CHICAGO, INDIANA

METHOD OF SECURING MACHINE FOR TRANSIT

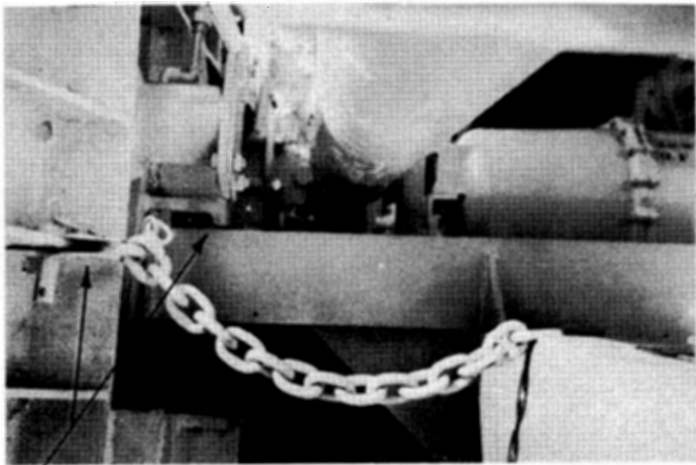
MODEL NO. 3-175 & 3-210 WITH SNOW PLOW EXTENSION AS SHOWN
MODEL NO. 3-200 & 3-211 WITHOUT SNOW PLOW EXTENSION



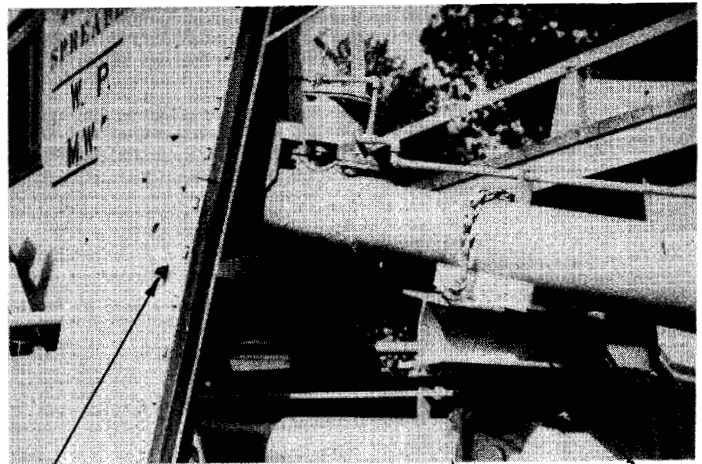
CAR SECURED FOR TRANSIT.
JOURNAL BOX INSPECTION DOOR TO BE
OPENED AND BOLTED TO SIDE OF PLOW.



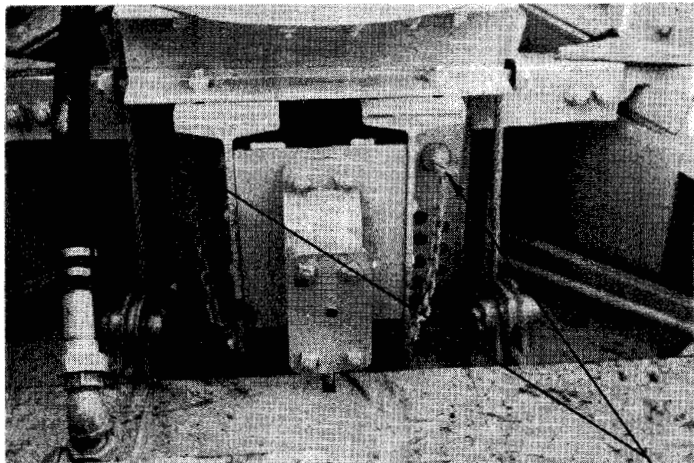
RAISE MAIN WING POSTS TO HIGHEST
POINT, INSERT CROSSHEAD PINS.
LOWER CROSSHEAD ON PINS.



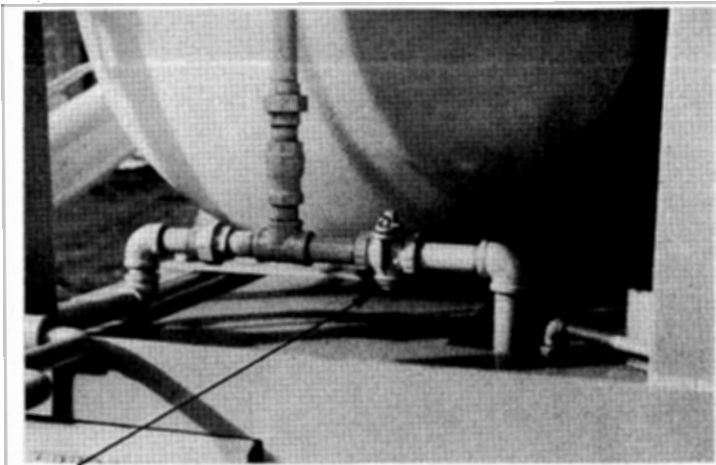
MAIN WING TO REST ON CROSSBEAM AND
BE SECURED WITH CHAIN.



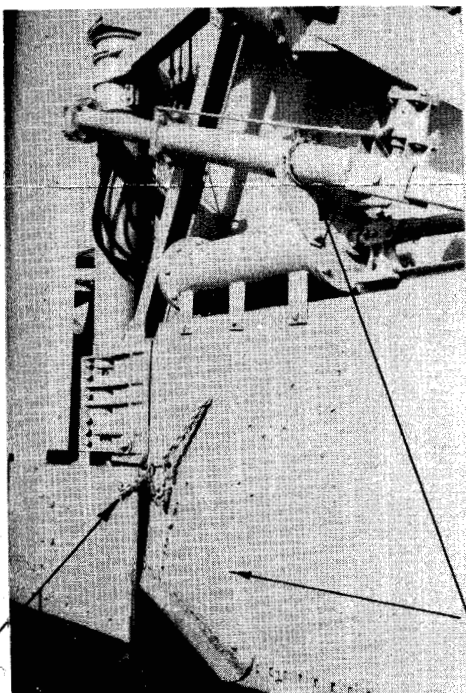
MAIN WINGS HELD TIGHT TO SIDE OF CAR
BY TIE RODS. REAR MAIN BRACE TO BE
CHAINED TO REAR BRACE REST.



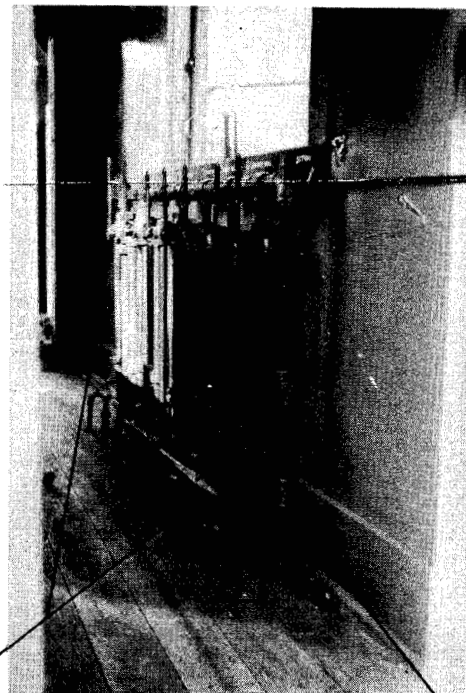
RAISE FRONT PLOW TO IT'S HIGHEST POINT,
INSERT TWO (2) PINS IN CROSSHEAD AND
SECURE PINS WITH COTTER KEYS.
VALVE TO BE OPEN TO ALLOW AIR TO
PASS THROUGH TRAIN LINE WHILE IN TRANSIT.



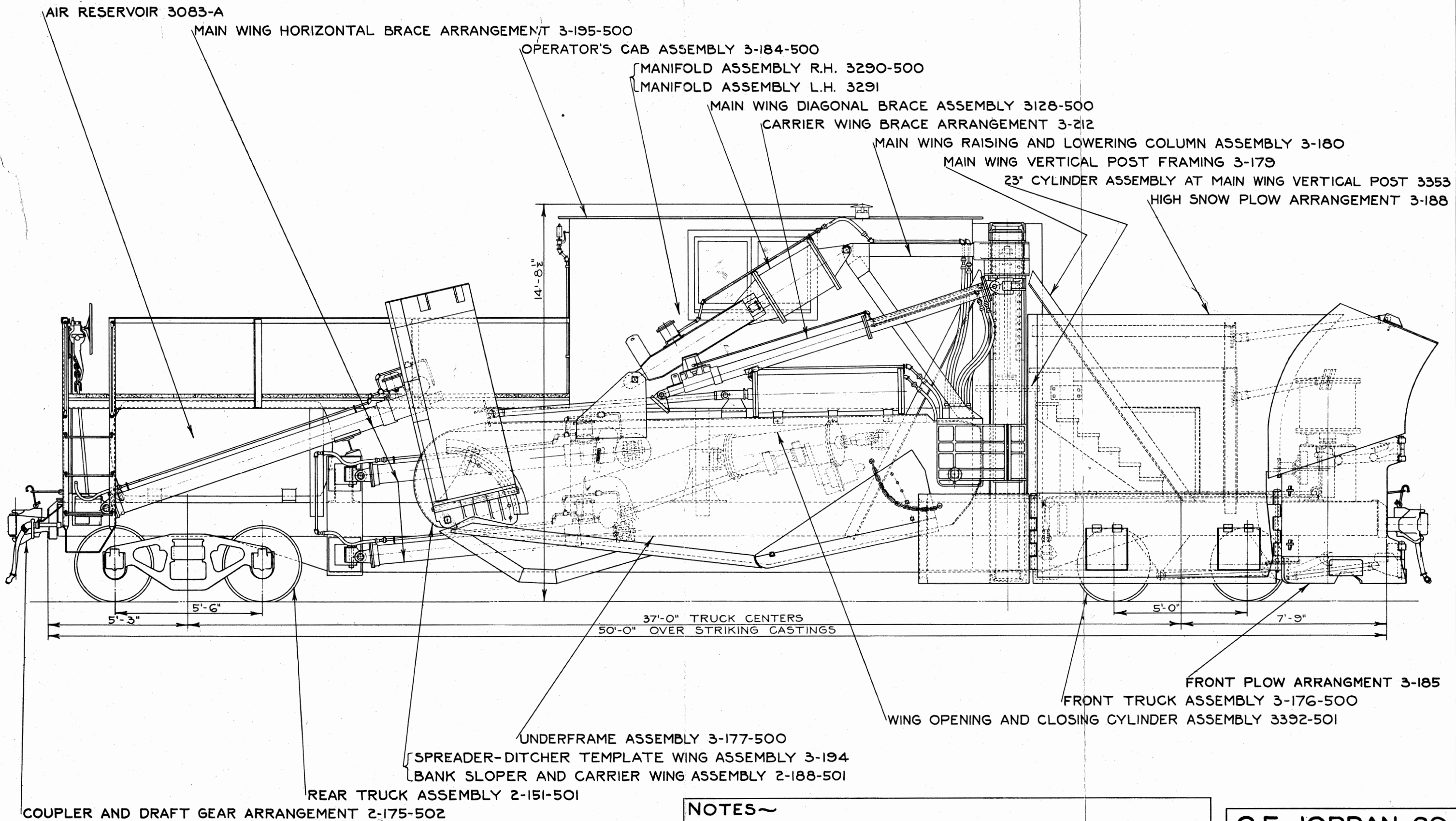
STOP COCK TO TRAIN LINE TO BE CLOSED
AND MAIN RESERVOIR TO BE DRAINED.
RESERVOIR DRAIN VALVE TO BE LEFT OPEN.



SAFETY CHAIN FOR SMALL END WING TO BE
MADE TAUT BY GATHERING TOGETHER AND
BOLTING LOOP CLOSED. CARRIER WING
BRACE TO REST IN SADDLE AND BE
SECURED WITH CHAIN. ADJUSTABLE BALLAST
SECTION TO BE IN RAISED POSITION.



ALL UPPER VALVES AND FOOT PEDALS TO BE
IN NEUTRAL POSITION. MANIFOLD
CUTOUT COCK TO BE IN OFF POSITION.



NOTES~

WHEN ORDERING PARTS ALWAYS SPECIFY MANUFACTURERS CAR SERIAL NUMBER. ALSO SPECIFY IF R.H. OR L.H. IS REQUIRED. R.H.=RIGHT HAND L.H.=LEFT HAND

NOTES~

NAMES AND PART NUMBERS SHOWN ARE FOR SUB ASSEMBLIES AND REFERENCE SHOULD BE MADE TO THEIR INDIVIDUAL DRAWINGS OR PAGES FOR PIECE PARTS.

AIR LINES AND EQUIPMENT FOR TYPE "A" DITCHERS PAGE 3-175-PK.

AIR BRAKE AND RIGGING PAGE 3-183.

O.F. JORDAN CO.

EAST CHICAGO, INDIANA

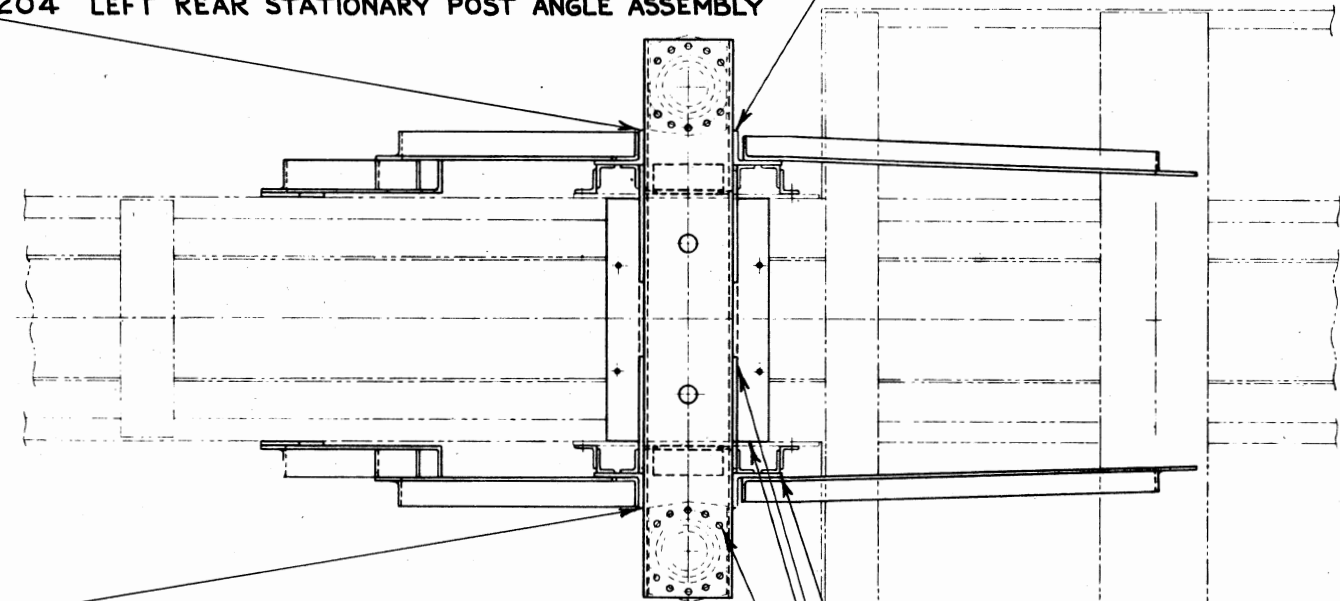
TYPE A

SPREADER-DITCHER SNOW PLOW

WITH LONG TEMPLATE WING

REPAIR PART INDEX MODEL No. 3-175

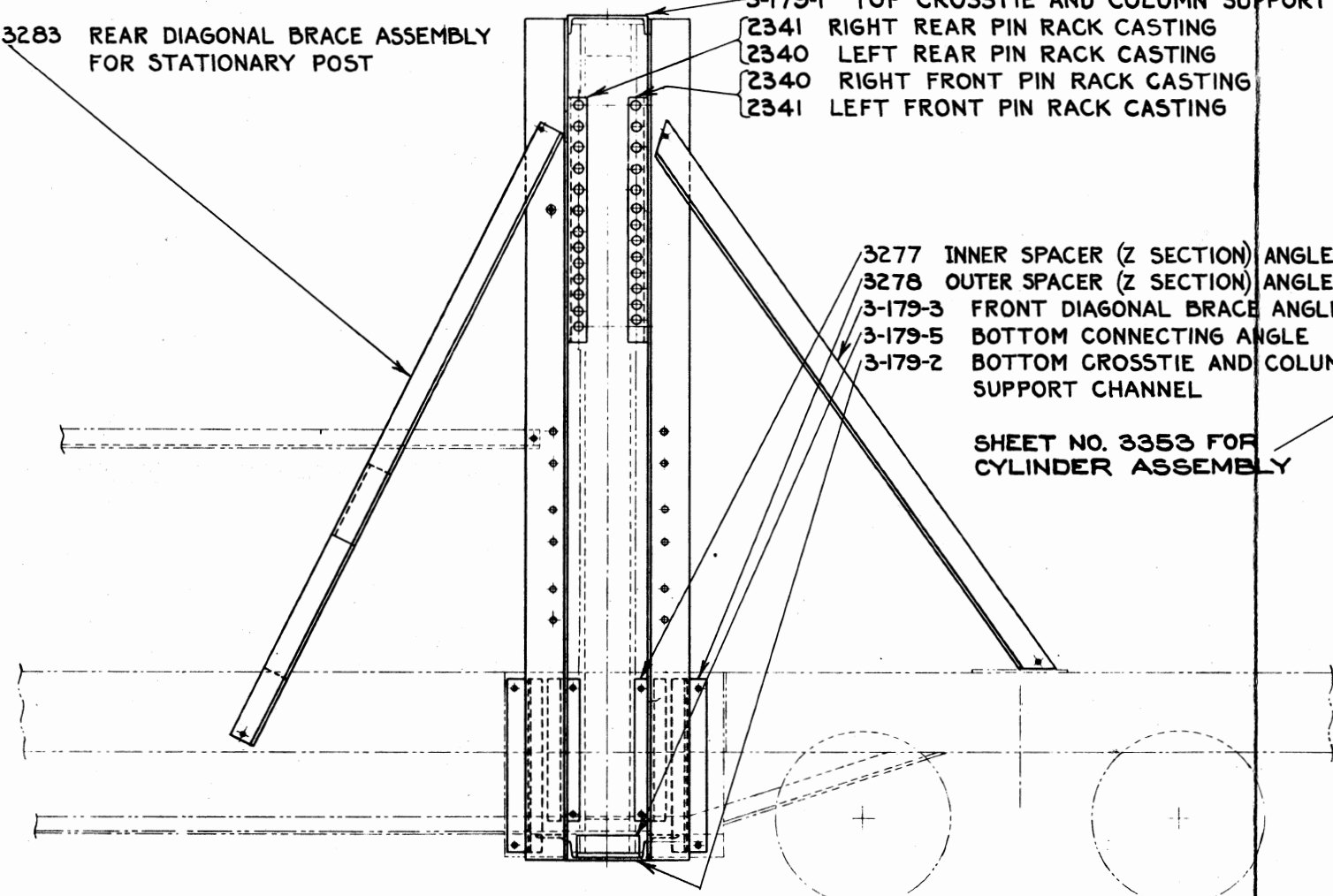
3-204 LEFT REAR STATIONARY POST ANGLE ASSEMBLY
 3-202 LEFT FRONT STATIONARY POST ANGLE ASSEMBLY



3-203 RIGHT REAR STATIONARY POST ANGLE ASSEMBLY
 3-201 RIGHT FRONT STATIONARY POST ANGLE ASSEMBLY

3-179-6 INNER GUSSET PLATE AT TOP CROSSTIE
 3-179-4 BOTTOM CROSSTIE SUPPORT ANGLE
 11273 B. H. RIVET 7/8" DIA. X 4"
 3-179-1 TOP CROSSTIE AND COLUMN SUPPORT CHANNEL
 2341 RIGHT REAR PIN RACK CASTING
 2340 LEFT REAR PIN RACK CASTING
 2340 RIGHT FRONT PIN RACK CASTING
 2341 LEFT FRONT PIN RACK CASTING

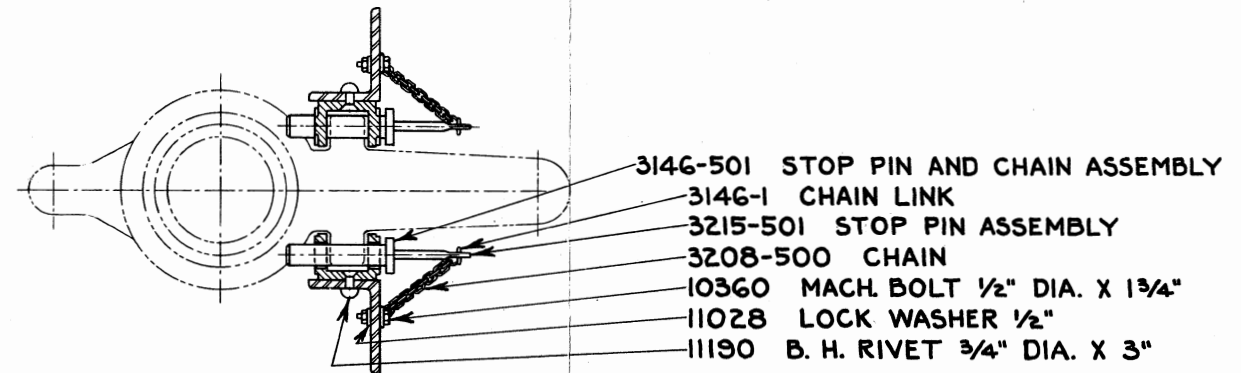
3283 REAR DIAGONAL BRACE ASSEMBLY FOR STATIONARY POST



3277 INNER SPACER (Z SECTION) ANGLE ASSEMBLY
 3278 OUTER SPACER (Z SECTION) ANGLE ASSEMBLY
 3-179-3 FRONT DIAGONAL BRACE ANGLE
 3-179-5 BOTTOM CONNECTING ANGLE
 3-179-2 BOTTOM CROSSTIE AND COLUMN SUPPORT CHANNEL

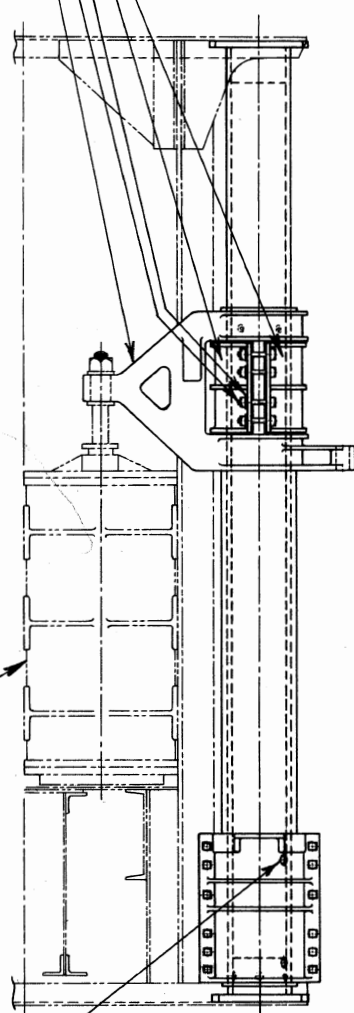
SHEET NO. 3353 FOR CYLINDER ASSEMBLY

STATIONARY POST ARRANGEMENT NO. 3-179-A



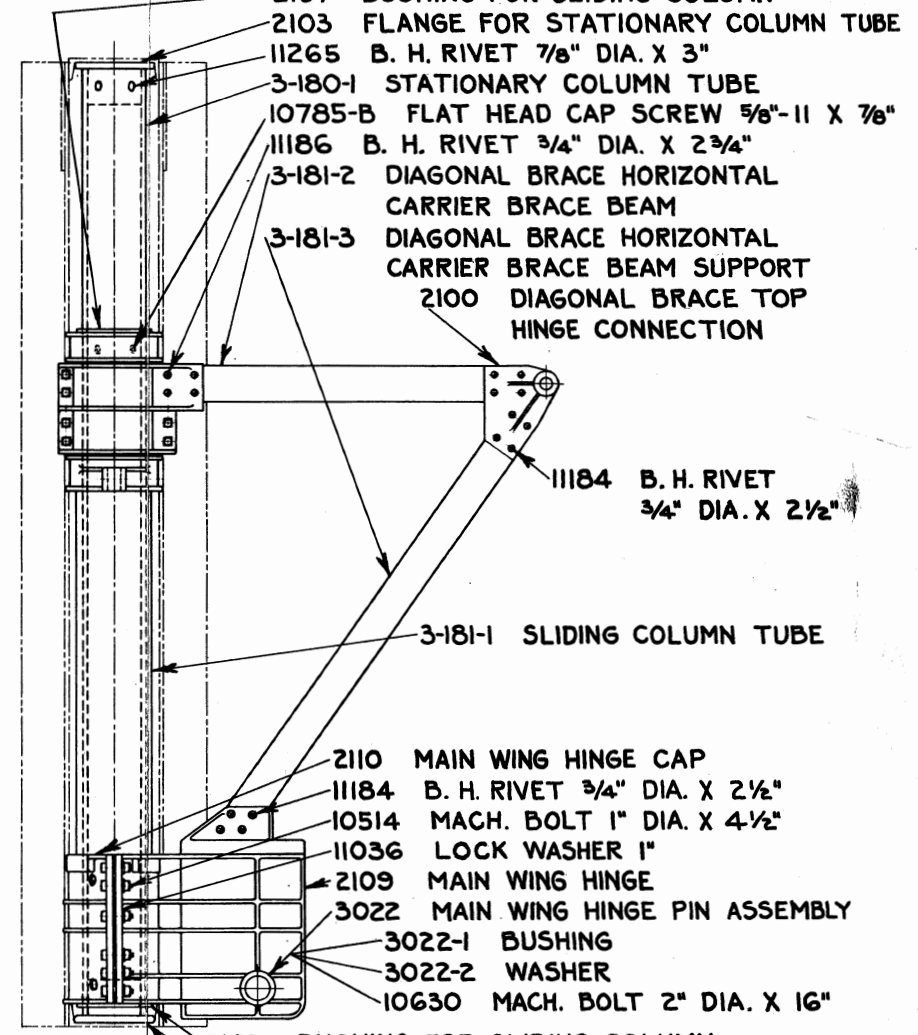
3146-501 STOP PIN AND CHAIN ASSEMBLY
 3146-1 CHAIN LINK
 3215-501 STOP PIN ASSEMBLY
 3208-500 CHAIN
 10360 MACH. BOLT 1/2" DIA. X 1 3/4"
 11028 LOCK WASHER 1/2"
 11190 B. H. RIVET 3/4" DIA. X 3"

3378 CROSSHEAD FOR SLIDING COLUMN
 10490 MACH. BOLT 7/8" X 5"
 11034 LOCK WASHER 7/8"
 2098 CROSSHEAD HALF BEARING BRACKET
 2099 CROSSHEAD HALF BEARING BRACKET



10784 CAP SCREW (FIL. HD) 5/8"-11 X 7/8"

2107 BUSHING FOR SLIDING COLUMN
 2103 FLANGE FOR STATIONARY COLUMN TUBE
 11265 B. H. RIVET 7/8" DIA. X 3"
 3-180-1 STATIONARY COLUMN TUBE
 10785-B FLAT HEAD CAP SCREW 5/8"-11 X 7/8"
 11186 B. H. RIVET 3/4" DIA. X 2 3/4"
 3-181-2 DIAGONAL BRACE HORIZONTAL CARRIER BRACE BEAM
 3-181-3 DIAGONAL BRACE HORIZONTAL CARRIER BRACE BEAM SUPPORT
 2100 DIAGONAL BRACE TOP HINGE CONNECTION



11184 B. H. RIVET 3/4" DIA. X 2 1/2"

2110 MAIN WING HINGE CAP
 11184 B. H. RIVET 3/4" DIA. X 2 1/2"
 10514 MACH. BOLT 1" DIA. X 4 1/2"
 11036 LOCK WASHER 1"
 2109 MAIN WING HINGE
 3022 MAIN WING HINGE PIN ASSEMBLY
 3022-1 BUSHING
 3022-2 WASHER
 10630 MACH. BOLT 2" DIA. X 16"

2107 BUSHING FOR SLIDING COLUMN
 2103 FLANGE FOR STATIONARY COLUMN TUBE

SLIDING POST ARRANGEMENT NO. 3-180

O. F. JORDAN CO.
 EAST CHICAGO, INDIANA
MAIN WING VERTICAL POSTS
 FOR RAISING AND LOWERING WINGS

REPAIR PART Nos. 3-179-A
 3-180

- 3193-1 CLAMP FOR PIPE BRACE
- 10505 MACH. BOLT 1" DIA. X 3" WITH 11036 LOCK WASHER 1"
- 3193-2 LINK FOR PIPE BRACE
- 10510 MACH. BOLT 1" DIA. X 4" WITH 11038 LOCK WASHER 1" (FOR 3255-501)
- 3-185-2 PIPE SPACER
- 3257-501 TENSION SPRING ASSEMBLY
- 3321-502 PLOW BRACE ASSEMBLY
- 3-185-3 PIPE SPACER

- 10429 MACH. BOLT 3/4" DIA. X 3 3/4" WITH 11032 LOCK WASHER 3/4"
- 3184-502 PIN 1 1/4" DIA. X 5" WITH 11064 WASHER & 11378 COTTER PIN
- 2069 REAR SHEAVE BRACKET L.H.
- 2070 REAR SHEAVE BRACKET R.H.
- 11186 B. H. RIVETS 3/4" DIA. X 2 3/4"
- 209 CABLE SHEAVE
- 3255-501 PLOW SIDE LIFT CABLE ASSEMBLY

- 11184 B. H. RIVETS 3/4" DIA. X 2 1/2"
- 209 CABLE SHEAVE
- 2073 SHEAVE BRACKET
- 3321-501 PLOW BRACE ASSEMBLY (INTERMEDIATE)
- 3-185-3 PIPE SPACER

- 3184-500 PIN 1 1/4" DIA. X 4"
- 11064 WASHERS 1 1/4"
- 11378 COTTER PINS
- 3525 PLOW FRAME TOP BRACE BAR
- 3321-500 PLOW BRACE ASSEMBLY (CENTER)

- 10488 MACH. BOLTS 7/8" DIA. X 4 1/2"
- 11034 LOCK WASHERS 7/8"
- 3184-502 PINS 1 1/4" DIA. X 5"
- 11064 WASHERS 1 1/4"
- 11378 COTTER PINS 1/4" DIA. X 2"
- 10480 MACH. BOLTS 7/8" DIA. X 3 1/2"
- 11034 WASHERS 7/8"
- 2178 LIFT BRACKET FOR CROSSHEAD R.H.
- 2179 LIFT BRACKET FOR CROSSHEAD L.H.
- 3124-503 PINS 1" DIA. X 5"
- 11062 WASHERS 1"
- 11378 COTTER PINS 1/4" DIA. X 2"
- 3184-500 PINS 1 1/4" DIA. X 4"
- 11064 WASHERS 1 1/4"
- 11378 COTTER PINS 1/4" DIA. X 2"

3523 PLOW WING BRACE ASSEMBLY (EXTENSION WING BRACE)

- 3440 PLOW FRAME SIDE BRACE ANGLE
- 3184-500 PIN 1 1/4" DIA. X 4" WITH 11064 WASHER & 11378 COTTER PIN
- 3130-500 SAFETY AND ADJUSTMENT CHAIN
- 3-185-1 CHAIN CATCH
- 3124-503 PIN 1" DIA. X 5" WITH 11062 WASHER & 11378 COTTER PIN

- FOR LOCK CYLINDER ASSEMBLY
[SEE REPAIR PART SHEET 3205
10406 MACH. BOLTS 3/4" DIA. X 2 1/2"
11032 LOCK WASHERS 3/4"

FOR PLOW CYLINDER & PEDESTAL
ASSEMBLY SEE REPAIR PART
SHEET 3270

- 11181 B. H. RIVETS 3/4" DIA. X 2"
- 11184 B. RIVETS 3/4" DIA. X 2 1/2"
- 2083 TOP HINGE L.H.
- 2084 TOP HINGE R.H.

3176-501 PIN 2" DIA. X 10"

PLOW FRONT WING
ASSEMBLY
3-187-503 (R.H. OR L.H.)

- 2055 BOTTOM HINGE L.H.
- 2056 BOTTOM HINGE R.H.
- 11184 B. H. RIVETS 3/4" DIA. X 2 1/2"
- 10567 MACH. BOLTS 1 1/4" DIA. X 4"
- 11040 LOCK WASHERS 1 1/4"
- 11240 PINS 3/4" DIA. X 10"
- 2394 RAIL SHOE
- 2392 CUTTING SHOE R.H.
- 2393 CUTTING SHOE L.H.
- 10406 MACH. BOLTS 3/4" DIA. X 2 1/2"
- 11032 LOCK WASHERS 3/4"
- 10563 MACH. BOLTS 1 1/4" DIA. X 3 1/4"
- 11040 LOCK WASHERS 1 1/4"
- 2390 CUTTING BLADE R.H.
- 2391 CUTTING BLADE L.H.

- 3176-503 PIN 2" DIA. X 13"
- 3-186-4 KEYS FOR PLOW FRONT WING WITH 11378 COTTER PINS
- 11204 B. H. RIVETS 3/4" DIA. X 4 1/2"
- 69 BRACE CONNECTION
- 11184 B. H. RIVETS 3/4" DIA. X 2 1/2"
- 3243-2 STIFFENER CHANNEL FOR CENTER FULCRUM
- 11190 B. H. RIVETS 3/4" DIA. X 3"
- 2184 PLOW CENTER FULCRUM
- 3263-1 CENTER FULCRUM SUPPORT CHANNEL
- 3263 PLOW CENTER FULCRUM ASSEMBLY
- 2185 PLOW SIDE FULCRUM
- 10406 MACH. BOLTS 3/4" DIA. X 2 1/2" WITH 11032 LOCK WASHERS 3/4"

- 2186 PLOW SIDE HINGE R.H.
- 2187 PLOW SIDE HINGE L.H.
- 11184 B. H. RIVETS 3/4" DIA. X 2 1/2"
- 11181 B. H. RIVETS 3/4" DIA. X 2"
- 3-186-1 TOP CHORD ANGLE (R.H. OR L.H.)

FRONT PLOW FRAME ASSEMBLY
3-186-501

- 2054 FRONT PLOW NOSE
- 3-186-2 BOTTOM CHORD ANGLE (R.H. OR L.H.)
- 11178 CTSK. RIVETS 3/4" DIA. X 1 3/4"
- 3-186-3 CENTER BRACE CHANNEL (R.H. OR L.H.)
- 3-186-5 GUSSET PLATE FOR BOTTOM CHORD ANGLE
- 2218 PLOW SIDE BRACE CONNECTION R.H.
- 2219 PLOW SIDE BRACE CONNECTION L.H.
- 11192 B. H. RIVETS 3/4" DIA. X 3 1/4"

PLOW FRONT WING ASSEMBLY
3-187-500 (R.H. OR L.H.)

- 2188-1 KEYS FOR CUTTING BLADES
- 10416 MACH. BOLTS 3/4" DIA. X 3"
- 11032 LOCK WASHERS 3/4"
- 11095 BEVEL WASHERS 3/4"
- 2216 RAIL SHOE R.H.
- 2217 RAIL SHOE L.H.
- 2201 CUTTING BLADE L.H.
- 2202 CUTTING BLADE R.H.

PLOW FRONT WING ASSEMBLY
3-187-501 (R.H. OR L.H.)

- 2237 DEEP CUTTING SHOE (OUTER SECTION) L.H.
- 2238 DEEP CUTTING SHOE (OUTER SECTION) R.H.
- 2188-1 KEYS FOR CUTTING SHOES
- 10416 MACH. BOLTS 3/4" DIA. X 3"
- 11032 LOCK WASHERS 3/4"
- 11095 BEVEL WASHERS 3/4"
- 2216 RAIL SHOE R.H.
- 2217 RAIL SHOE L.H.
- 2235 DEEP CUTTING SHOE (INNER SECTION) L.H.
- 2236 DEEP CUTTING SHOE (INNER SECTION) R.H.

PLOW FRONT WING
ASSEMBLY
3-187-502 (R.H. OR L.H.)

- 2240 CUTTING BLADE R.H.
- 2241 CUTTING BLADE L.H.
- 10416 MACH. BOLTS 3/4" DIA. X 3"
- 11032 LOCK WASHERS 3/4"
- 2244 RAIL SHOE
- 11250 PINS 3/4" DIA. X 13"
- 10406 MACH. BOLTS 3/4" DIA. X 2 1/2"
- 11032 LOCK WASHERS 3/4"
- 2242 CUTTING SHOE R.H.
- 2243 CUTTING SHOE L.H.

- 10416 MACH. BOLT 3/4" DIA. X 3" WITH 11032 LOCK WASHER 3/4"
- 10447 MACH. BOLT 3/4" DIA. X 6 1/2" WITH 11058 WASHER 3/4"
- 3171-504 SAFETY CHAIN
- 10460 MACH. BOLT 3/4" DIA. X 6" WITH 11032 LOCK WASHER 3/4"
- 2239 REAR HINGE BUTT
- 11192 B. H. RIVETS 3/4" DIA. X 3 1/4"
- 3254-501 PIN 1 3/8" DIA. X 2'-10"
- 3-189-10 INSPECTION DOOR
- 11405 BUTT HINGE
- 10505 MACH. BOLTS 1" DIA. X 3" WITH 11036 LOCK WASHERS 1"
- 334 FRONT HINGE BUTT
- 3254-500 PIN 1 3/8" DIA. X 3'-0"

- 3-189 PLOW SIDE WING ASSEMBLY (R.H. OR L.H.)
- 555 HINGE BUTT
- 11194 B. H. RIVETS 3/4" DIA. X 3 1/2"
- 10416 MACH. BOLTS 3/4" DIA. X 3" WITH 11032 LOCK WASHERS 3/4"
- 3-189-6 WEARING PLATE
- 11204 B. H. RIVETS 3/4" DIA. X 4 1/2"
- 69 BRACE CONNECTION

- 3-190 SMALL END WING ASSEMBLY (R.H. OR L.H.)
- 10416 MACH. BOLTS 3/4" DIA. X 3" WITH 11032 LOCK WASHERS 3/4"
- 3-190-7 WEAR BLADE BAR

- 3263-1 CENTER FULCRUM SUPPORT CHANNEL
- 3263 PLOW CENTER FULCRUM ASSEMBLY
- 2185 PLOW SIDE FULCRUM
- 10406 MACH. BOLTS 3/4" DIA. X 2 1/2" WITH 11032 LOCK WASHERS 3/4"

NOTES—
WHEN ORDERING PARTS ALWAYS SPECIFY
MANUFACTURERS CAR SERIAL NUMBER. ALSO
SPECIFY IF R.H. OR L.H. IS REQUIRED.
R.H. = RIGHT HAND L.H. = LEFT HAND

O.F. JORDAN CO.
EAST CHICAGO, INDIANA
**FRONT PLOW
ARRANGEMENT**

REPAIR PART No. 3-185

- 3184-500 PIN 1/4" DIA. X 4" LG.
- 11378 COTTER PIN 1/4" DIA. X 2" LG.
- 3-188-2 TOP CENTER TIE CHANNEL
- 3184-500 PIN 1/4" DIA. X 4" LG.
- 3334-501 BRACE ASSEMBLY
- 11032 LOCK WASHER 3/4"
- 10399 BOLT 3/4" DIA. X 1 3/4" LG.

- 11378 COTTER PIN 1/4" DIA. X 2" LG.
- 3334-500 BRACE ASSEMBLY
- 3-188-1 TOP HORIZONTAL CENTER BRACE ANGLE
- 3-188-3 FRONT TOP SIDE BRACE CHANNEL

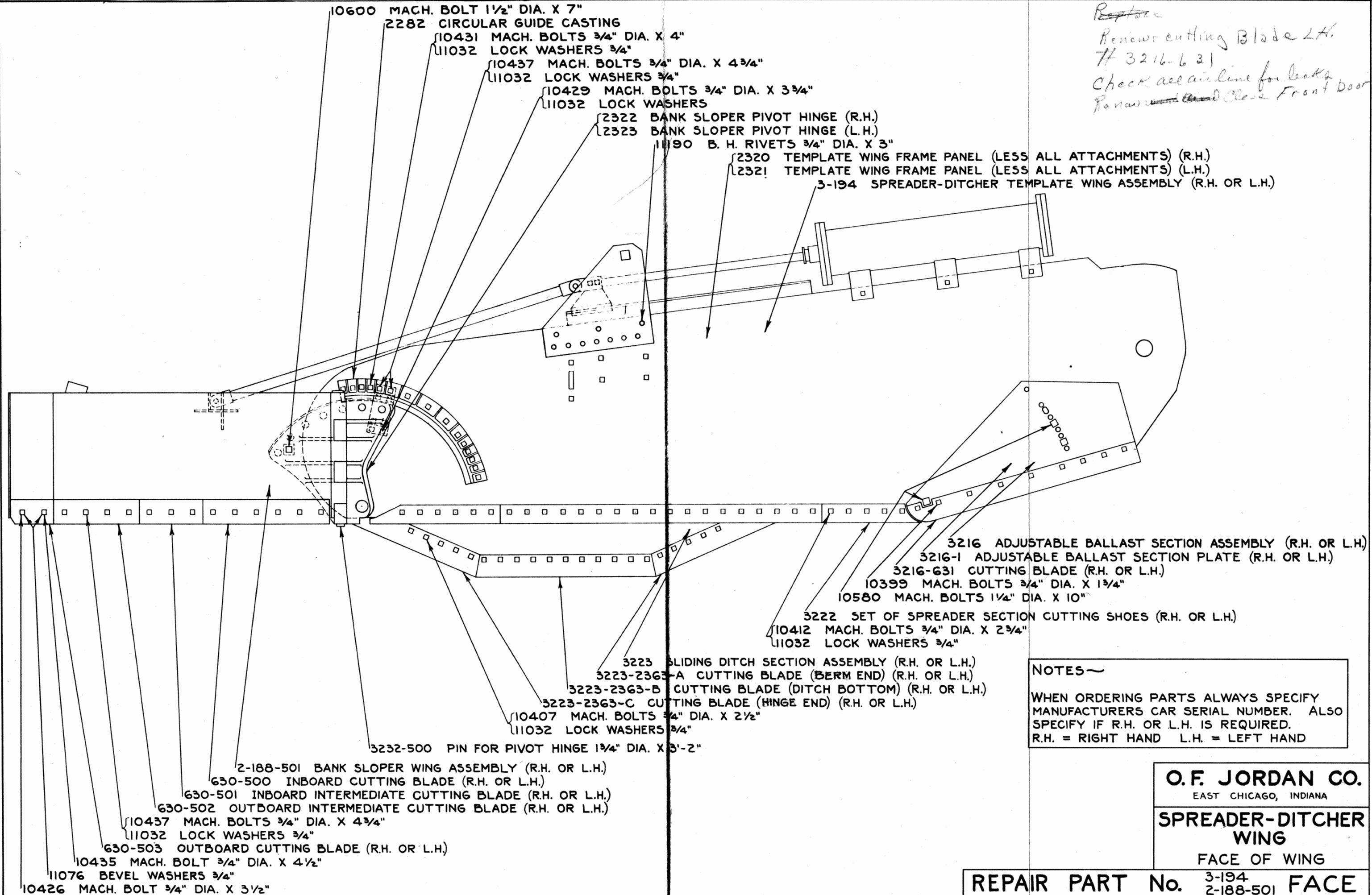
- 3-188-4 REAR TOP SIDE BRACE CHANNEL
- 3256-501 SNOW PLOW SIDE SHEET CLAMP ASSEMBLY
- 10399 BOLT 3/4" DIA. X 1 3/4" LG.
- 11032 LOCK WASHER 3/4"
- 3-197 SNOW PLOW SIDE SHEET ASSEMBLY
- 3328 SNOW PLOW SIDE FRAME ASSEMBLY

- 3-206 HIGH SNOW PLOW FLARE PLATE ASSEMBLY
- 11194 RIVET 3/4" DIA. X 3 1/2" B. H.
- 3-188-7 OUTSIDE FILLER BAR
- 3-188-5 SNOW PLOW CONNECTION ANGLE
- 3-188-6 INSIDE FILLER BAR
- 3327 SNOW PLOW REINFORCING VERTICAL H-BEAM ASSEMBLY

NOTES~
 WHEN ORDERING PARTS ALWAYS SPECIFY MANUFACTURERS CAR SERIAL NUMBER. ALSO SPECIFY IF R.H. OR L.H. IS REQUIRED.
 R.H.=RIGHT HAND L.H.=LEFT HAND

O. F. JORDAN CO.
 EAST CHICAGO, INDIANA
 HIGH SNOW PLOW
 ARRANGEMENT
 TYPE "A" CAR

REPAIR PART No. 3-188

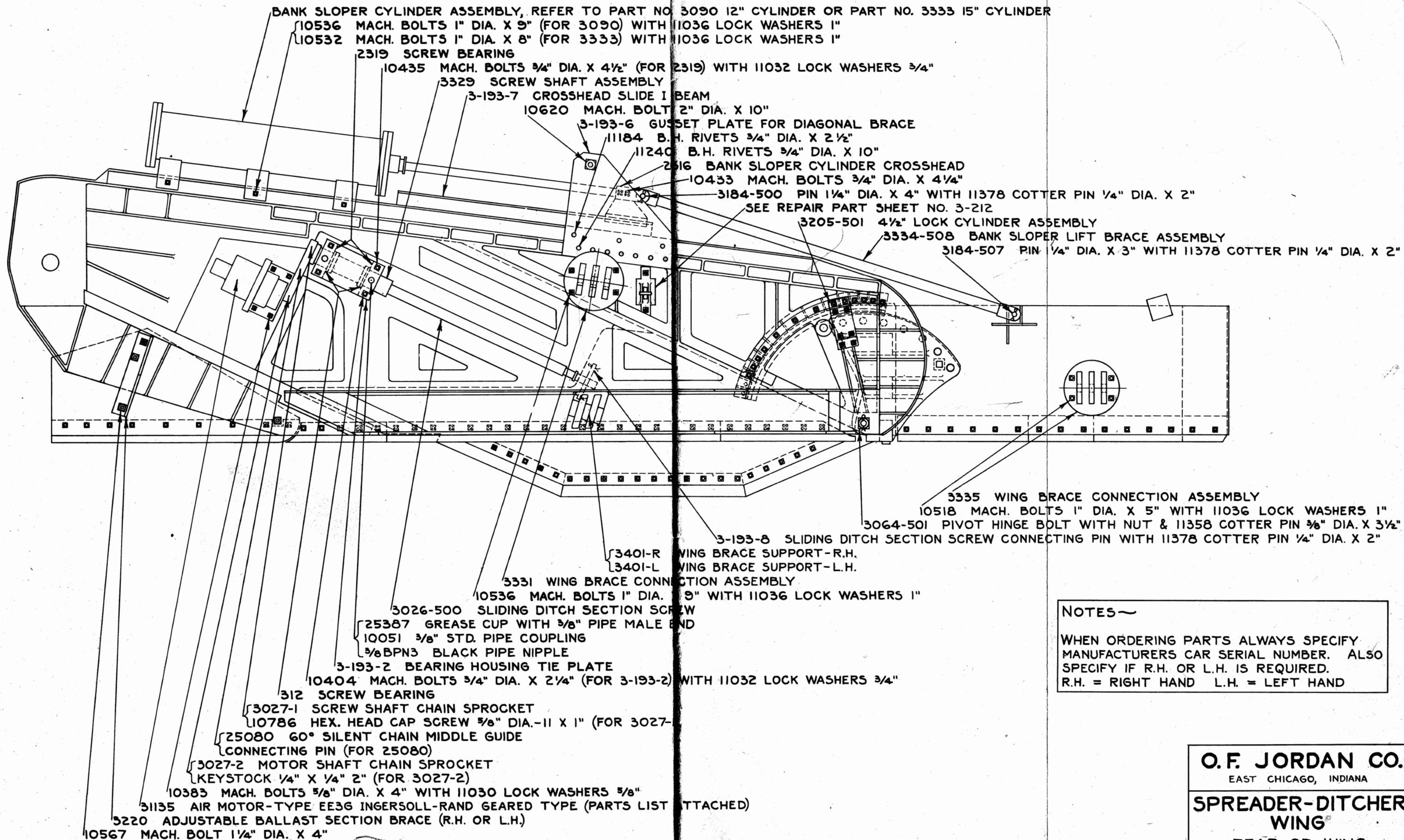


Replace
 Renew cutting Blade L.H.
 # 3216-631
 Check all airline for leaks
 Renew ~~and~~ Close Front Door

NOTES~
 WHEN ORDERING PARTS ALWAYS SPECIFY MANUFACTURERS CAR SERIAL NUMBER. ALSO SPECIFY IF R.H. OR L.H. IS REQUIRED.
 R.H. = RIGHT HAND L.H. = LEFT HAND

O.F. JORDAN CO.
 EAST CHICAGO, INDIANA
SPREADER-DITCHER WING
 FACE OF WING

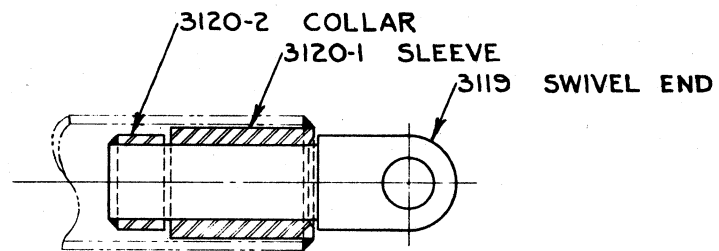
REPAIR PART No. 3-194
 2-188-501 **FACE**



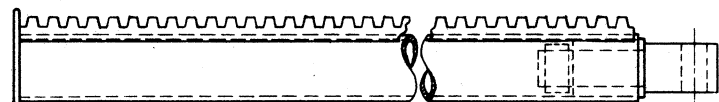
NOTES~
 WHEN ORDERING PARTS ALWAYS SPECIFY MANUFACTURERS CAR SERIAL NUMBER. ALSO SPECIFY IF R.H. OR L.H. IS REQUIRED.
 R.H. = RIGHT HAND L.H. = LEFT HAND

O. F. JORDAN CO.
 EAST CHICAGO, INDIANA
SPREADER-DITCHER
WING
 REAR OF WING

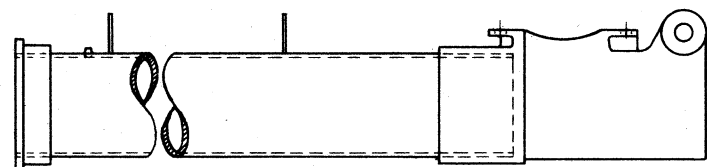
REPAIR PART No. 3-194-2-188-501 REAR



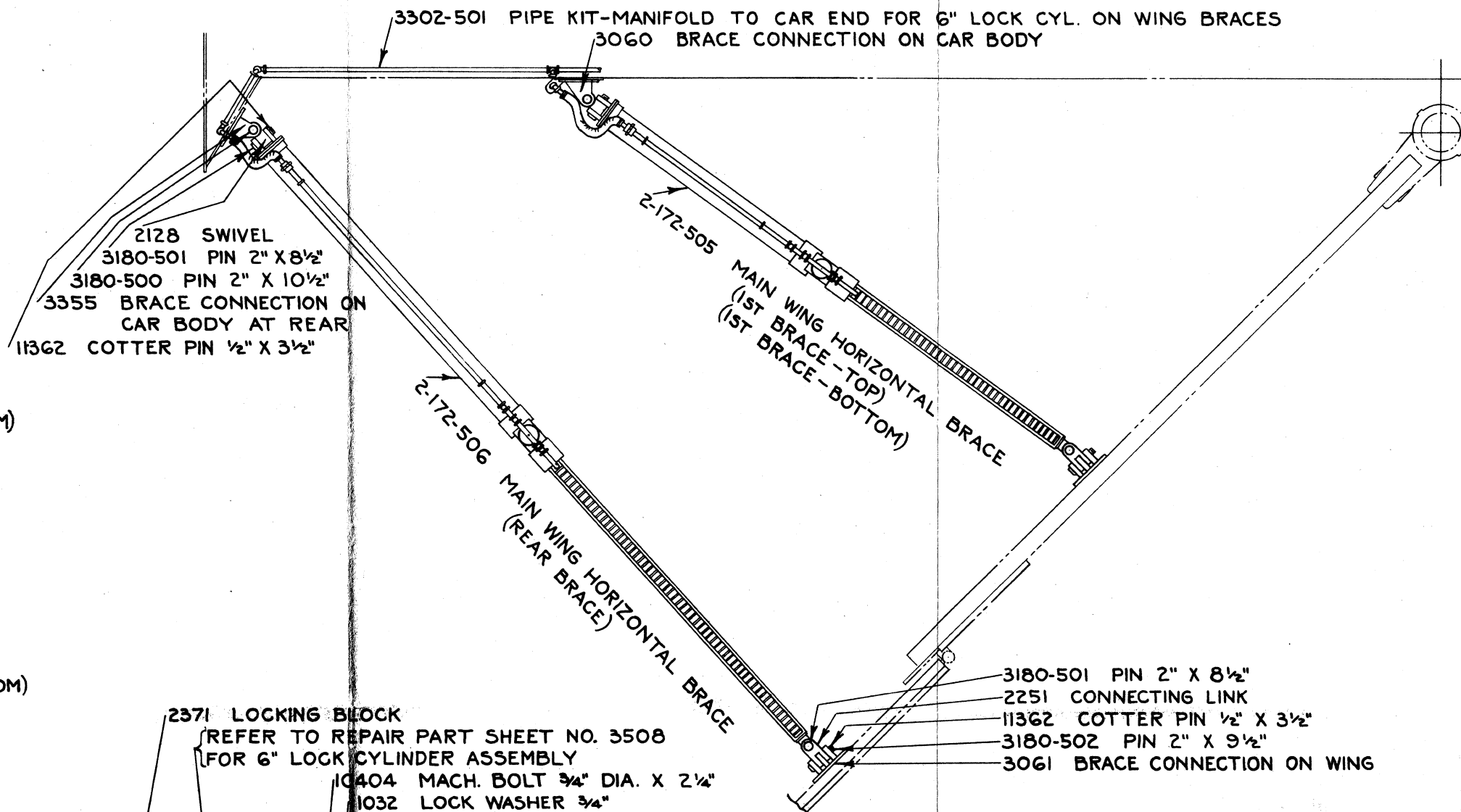
3120 BRACE WING END ASSEMBLY



- 2-173-505 INNER BRACE TUBE ASSEMBLY (1ST BRACE-TOP)
- 2-173-505 INNER BRACE TUBE ASSEMBLY (1ST BRACE-BOTTOM)
- 2-173-506 INNER BRACE TUBE ASSEMBLY (REAR BRACE)



- 2-174-505 OUTER BRACE PIPE ASSEMBLY (1ST BRACE-TOP)
- 2-174-505 OUTER BRACE PIPE ASSEMBLY (1ST BRACE-BOTTOM)
- 2-174-506 OUTER BRACE PIPE ASSEMBLY (REAR BRACE)



- 2128 SWIVEL
- 3180-501 PIN 2" X 8 1/2"
- 3180-500 PIN 2" X 10 1/2"
- 3355 BRACE CONNECTION ON CAR BODY AT REAR
- 11362 COTTER PIN 1/2" X 3 1/2"

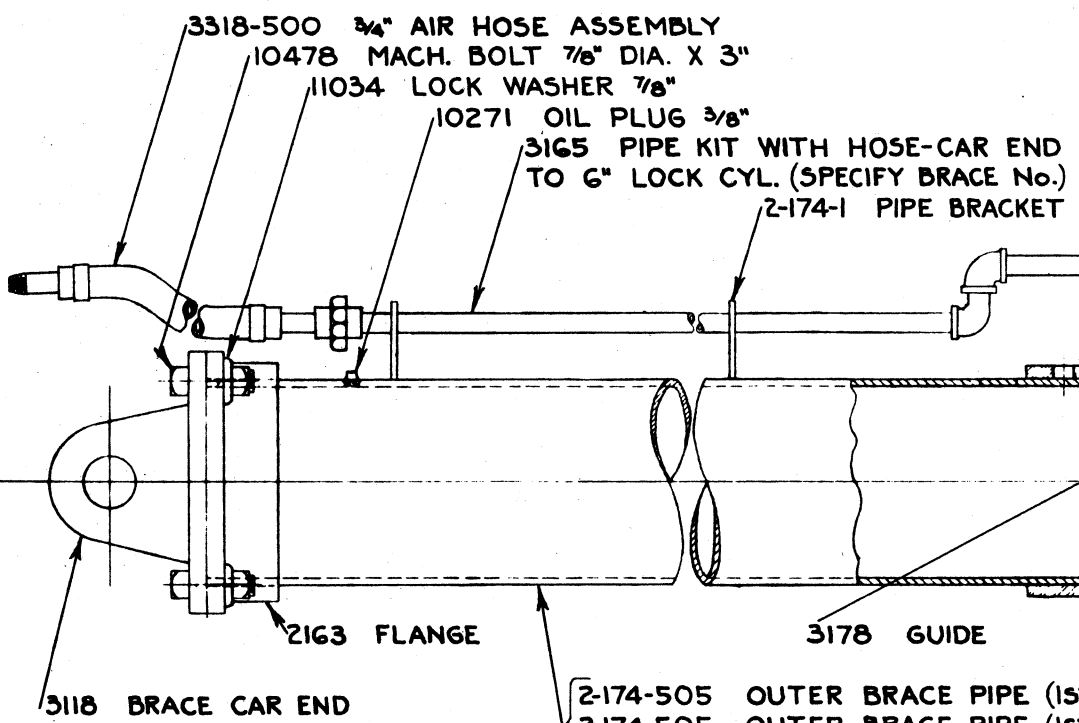
3302-501 PIPE KIT-MANIFOLD TO CAR END FOR 6" LOCK CYL. ON WING BRACES
3060 BRACE CONNECTION ON CAR BODY

2-172-505 MAIN WING HORIZONTAL BRACE (1ST BRACE-TOP)
2-172-506 MAIN WING HORIZONTAL BRACE (1ST BRACE-BOTTOM)

- 3180-501 PIN 2" X 8 1/2"
- 2251 CONNECTING LINK
- 11362 COTTER PIN 1/2" X 3 1/2"
- 3180-502 PIN 2" X 9 1/2"
- 3061 BRACE CONNECTION ON WING

- 2371 LOCKING BLOCK (REFER TO REPAIR PART SHEET NO. 3508 FOR 6" LOCK CYLINDER ASSEMBLY)
- 10404 MACH. BOLT 3/4" DIA. X 2 1/4"
- 1032 LOCK WASHER 3/4"

- 3034 SAFETY GUARD
- 2372 PINION GEAR
- 11355 COTTER PIN 3/8" DIA. X 2 1/2"
- 3034-3 PIN FOR GEAR C.R.S. 1 1/2" DIA. X 10"
- 10395 CAP SCREW 3/4" DIA. X 1 1/4" U.S.S.
- 2370 LOCK HOUSING



- 2-174-505 OUTER BRACE PIPE (1ST BRACE-TOP)
- 2-174-505 OUTER BRACE PIPE (1ST BRACE-BOTTOM)
- 2-174-506 OUTER BRACE PIPE (REAR BRACE)
- (SEE ASSEMBLY AND PARTIAL ASSEMBLY ABOVE)

- 2-173-505 INNER BRACE TUBE (1ST BRACE-TOP)
- 2-173-505 INNER BRACE TUBE (1ST BRACE-BOTTOM)
- 2-173-506 INNER BRACE TUBE (REAR BRACE)
- (SEE ASSEMBLY AND PARTIAL ASSEMBLY ABOVE)

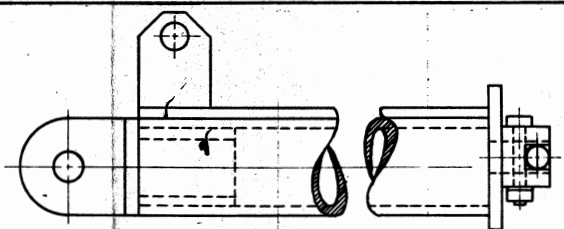
NOTES
WHEN ORDERING PARTS ALWAYS SPECIFY MANUFACTURERS CAR SERIAL NUMBER. ALSO SPECIFY IF R.H. OR L.H. IS REQUIRED.
R.H.=RIGHT HAND L.H.=LEFT HAND

3120 BRACE WING END (SEE ASSEMBLY ABOVE)

O.F. JORDAN CO.
EAST CHICAGO, INDIANA
MAIN WING HORIZONTAL BRACES

REPAIR PART No. 3-195-500

- 2-184-2 CONNECTION FOR 3207
- 3207 SPRING FOR 2175
- 10504 BOLT 1" DIA. X 2 1/2" LG.
- 1049-G BANK SLOPER HOOK BRACKET
- 11378 COTTER PIN 1/4" DIA. X 2" LG.
- 3184-501 HORIZONTAL PIN 1 1/4" DIA. X 3 1/2" LG.
- 2175 BANK SLOPER HOOK



- 3180-503 HORIZONTAL PIN 2" DIA. X 6" LG.
- 11362 COTTER PIN 1/2" X 3 1/2"
- 2251 CONNECTING LINK
- 3180-501 VERTICAL PIN 2" DIA. X 8 1/2" LG.

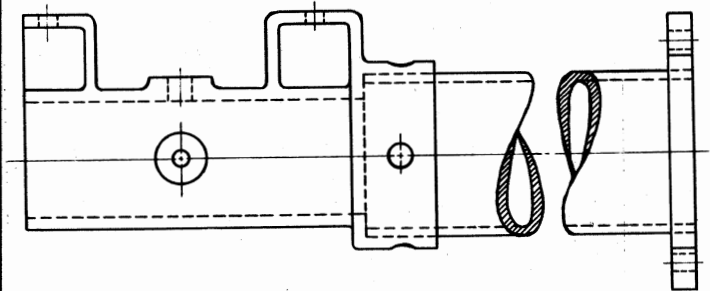
2-192-506 CARRIER WING BRACE TELESCOPIC BOX MEMBER ASSEMBLY

- 2-190-502 5" CYLINDER ASSEMBLY
- 3236-502 PISTON ROD
- 3109-502 5" CYLINDER DRUM

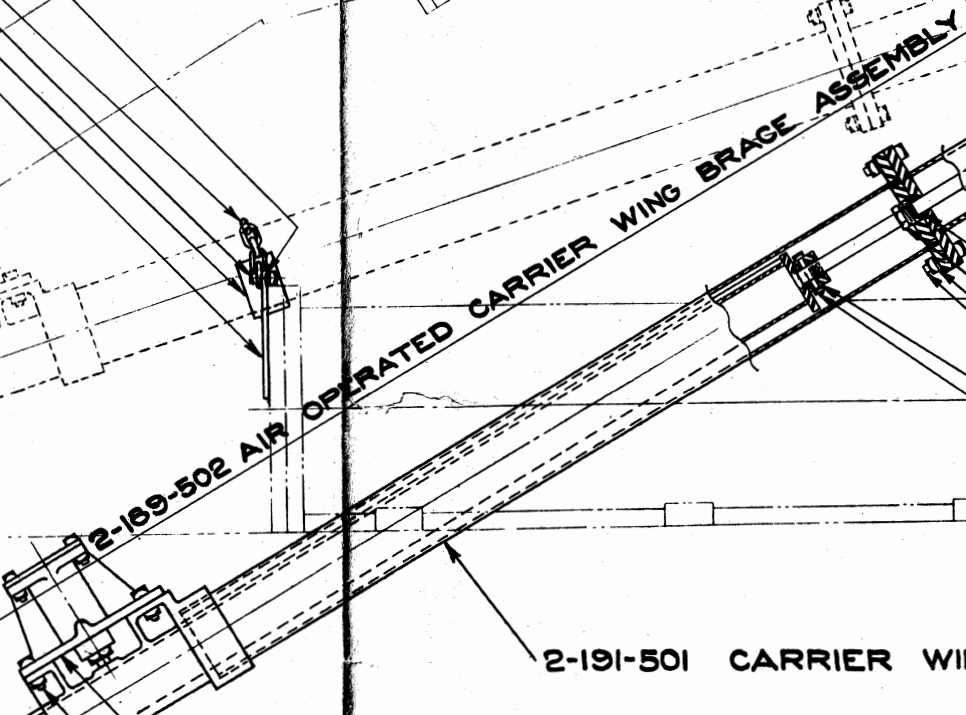
- 3105 BLOCK & TACKLE ASSEMBLY
- 3-212-1 TOP LIFT CONNECTION FOR CARRIER WING BRACE

- 3-212-3 CARRIER WING BRACE HANGER GUSSET PLATE
- 3-212-2 CARRIER WING BRACE HANGER CRADLE
- 10376 SQ. HD. BOLT 5/8" DIA. X 2" LG.
- 3208-501 SAFETY CHAIN FOR CARRIER WING BRACE
- 11030 LOCK WASHER 5/8"

SECTION "A-A"



2-191-501 CARRIER WING BRACE HOUSING ASSEMBLY



- 11362 COTTER PIN 1/2" X 3 1/2"
- 3101 BACK HEAD ASSEMBLY
- 2-190-4 CYLINDER HEAD GASKET
- 11032 LOCK WASHER
- 10416 BOLT 3/4" DIA. X 3" LG.
- 10905 STD. HEX. NUT 1"
- 2-190-3 CUP HOLDER
- 2-190-2 PISTON HEAD FOLLOWER
- 31295 PISTON PACKING CUP 5"
- 2-190-1 PISTON HEAD
- 3234-3 PISTON ROD PACKING RING
- 208 PACKING NUT
- 11032 LOCK WASHER
- 10416 BOLT 3/4" DIA. X 3" LG.
- 11028 LOCK WASHER
- 10370 BOLT 1/2" DIA. X 3 1/4" LG.

2-191-501 CARRIER WING BRACE HOUSING ASSEMBLY

REFER TO DRWG. 3234 FOR 3/4" LOCK CYLINDER ASSEMBLY
10378 BOLT 5/8" DIA. X 2 1/4" LG.

2-192-506 CARRIER WING BRACE TELESCOPIC BOX MEMBER ASSEMBLY

- 10439 BOLT 3/4" DIA. X 5" LG. FOR 2353
- 11032 LOCK WASHER 3/4"

- 3184-504 VERTICAL PIN 1 1/4" DIA. X 14" LG.
- 3184-501 HORIZONTAL PIN 1 1/4" DIA. X 3 1/2" LG.
- 11378 COTTER PIN 1/4" X 2"
- 2352 WING END UNIVERSAL LINK
- 11378 COTTER PIN 1/4" X 2"

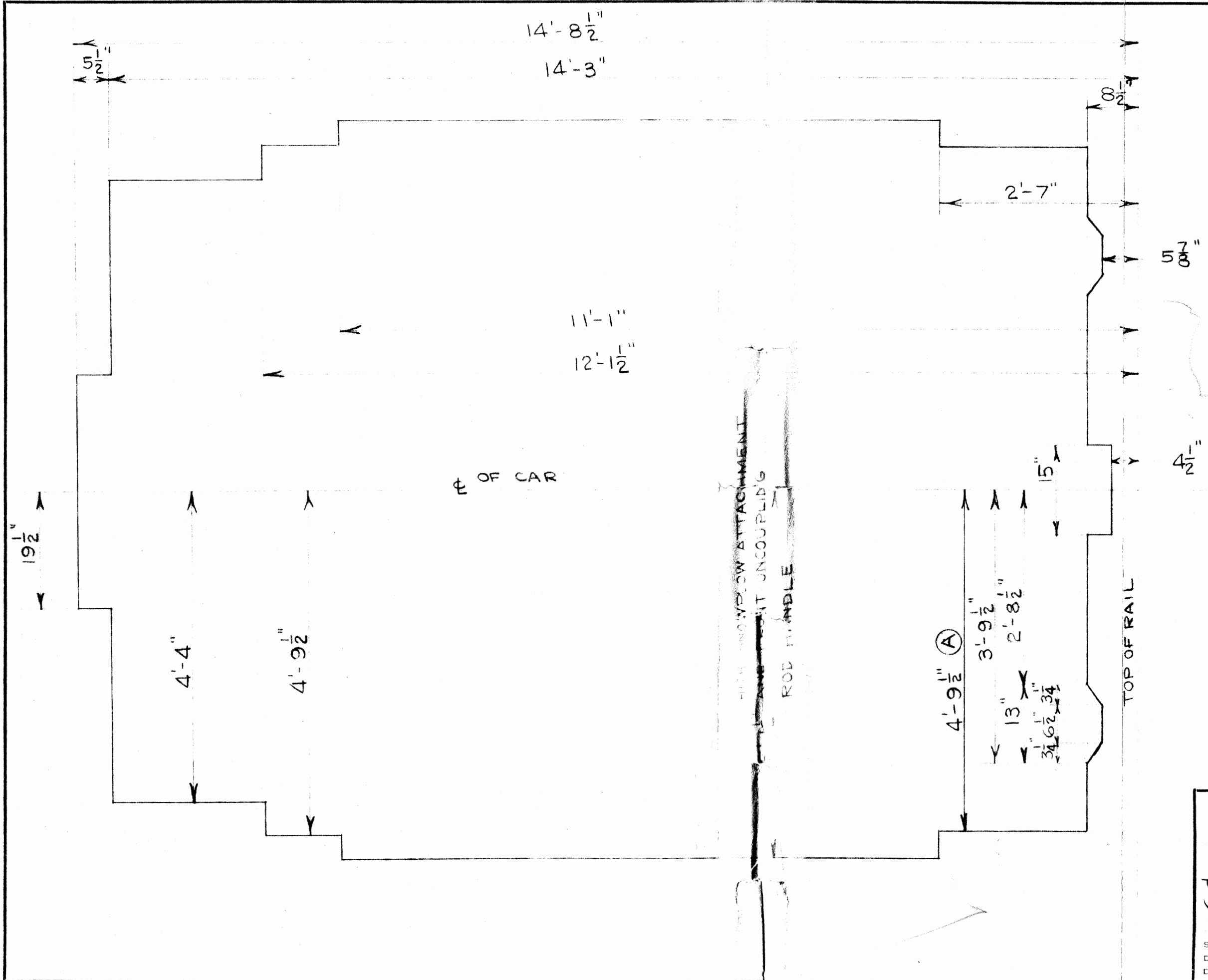
NOTES—
WHEN ORDERING PARTS ALWAYS SPECIFY MANUFACTURERS CAR SERIAL NUMBER. ALSO SPECIFY IF R.H. OR L.H. IS REQUIRED.
R.H.=RIGHT HAND L.H.=LEFT HAND

2353 BRACE END FOR CARRIER WING BRACE

FOR PIPE KIT SEE PAGE FOR PIPING.

O. F. JORDAN CO.
EAST CHICAGO, INDIANA
CARRIER WING BRACE ARRANGEMENT
LONG WING SPREADER DITCHER
TYPE "A" CAR

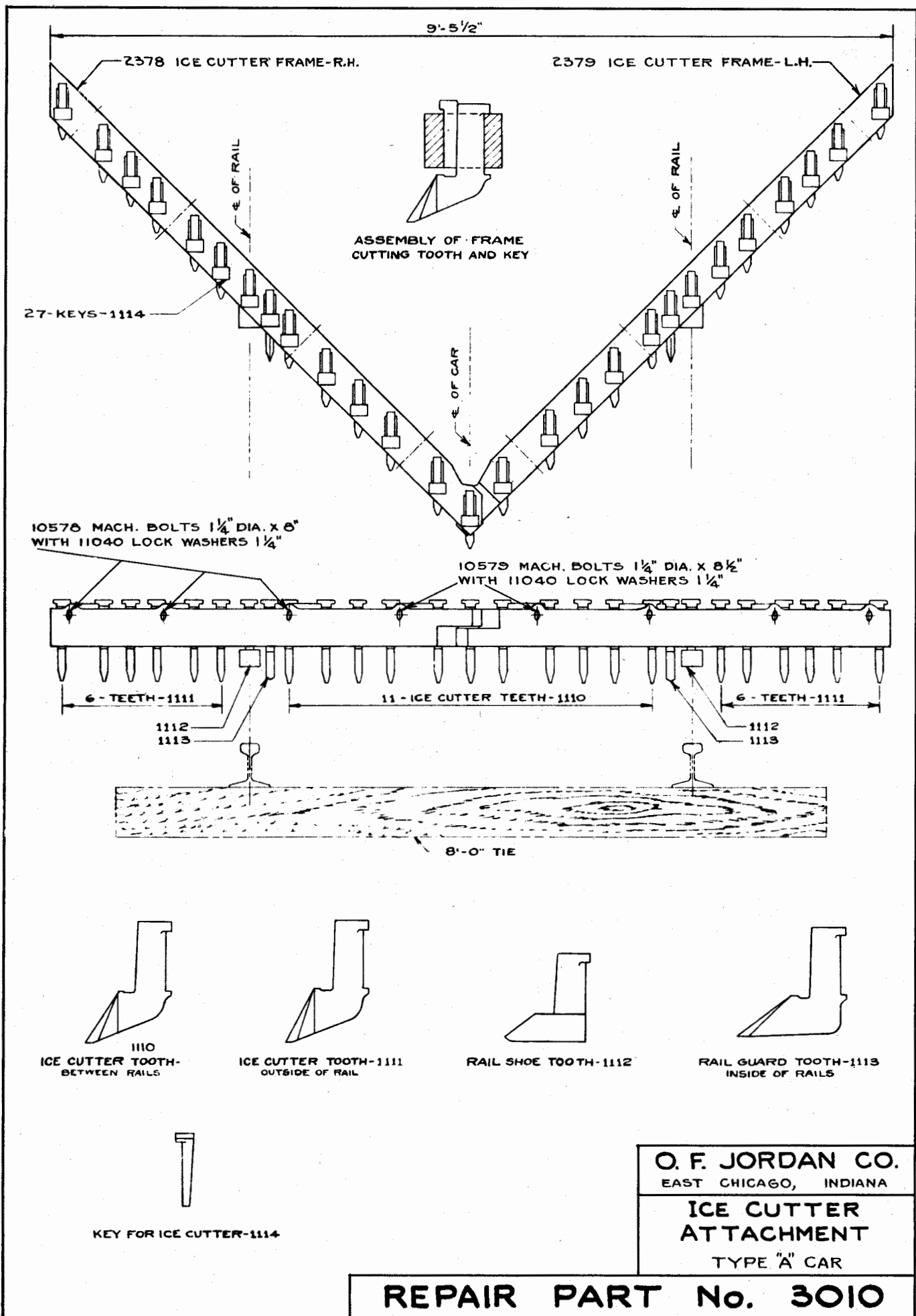
REPAIR PART No. 3-212



REVISIONS		
4-26-51	A	4'-9"
DATE	LOC	WAS

O. F. JORDAN CO.
 EAST CHICAGO, - INDIANA
 CLEARANCE DIAGRAM
 for
 TYPE "A" SPREADER-DITCHER
 WITH HIGH SNOW FLOW
 MODEL # 3-175 & 3-210
 SCALE 3/4" = 1'-0"
 DATE AUG 14, 1947
 DRAWN BY JJR

DRWG. NO.
3408



10578 MACH. BOLTS 1 1/4" DIA. x 8" WITH 11040 LOCK WASHERS 1 1/4"

10579 MACH. BOLTS 1 1/4" DIA. x 8 1/2" WITH 11040 LOCK WASHERS 1 1/4"

6 - TEETH - 1111

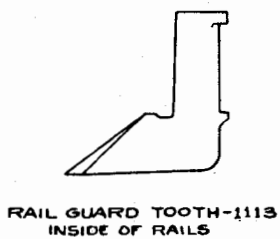
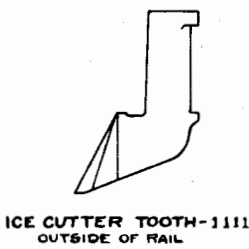
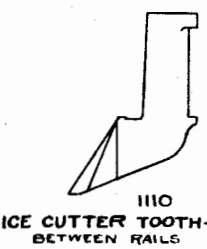
11 - ICE CUTTER TEETH - 1110

6 - TEETH - 1111

1112
1113

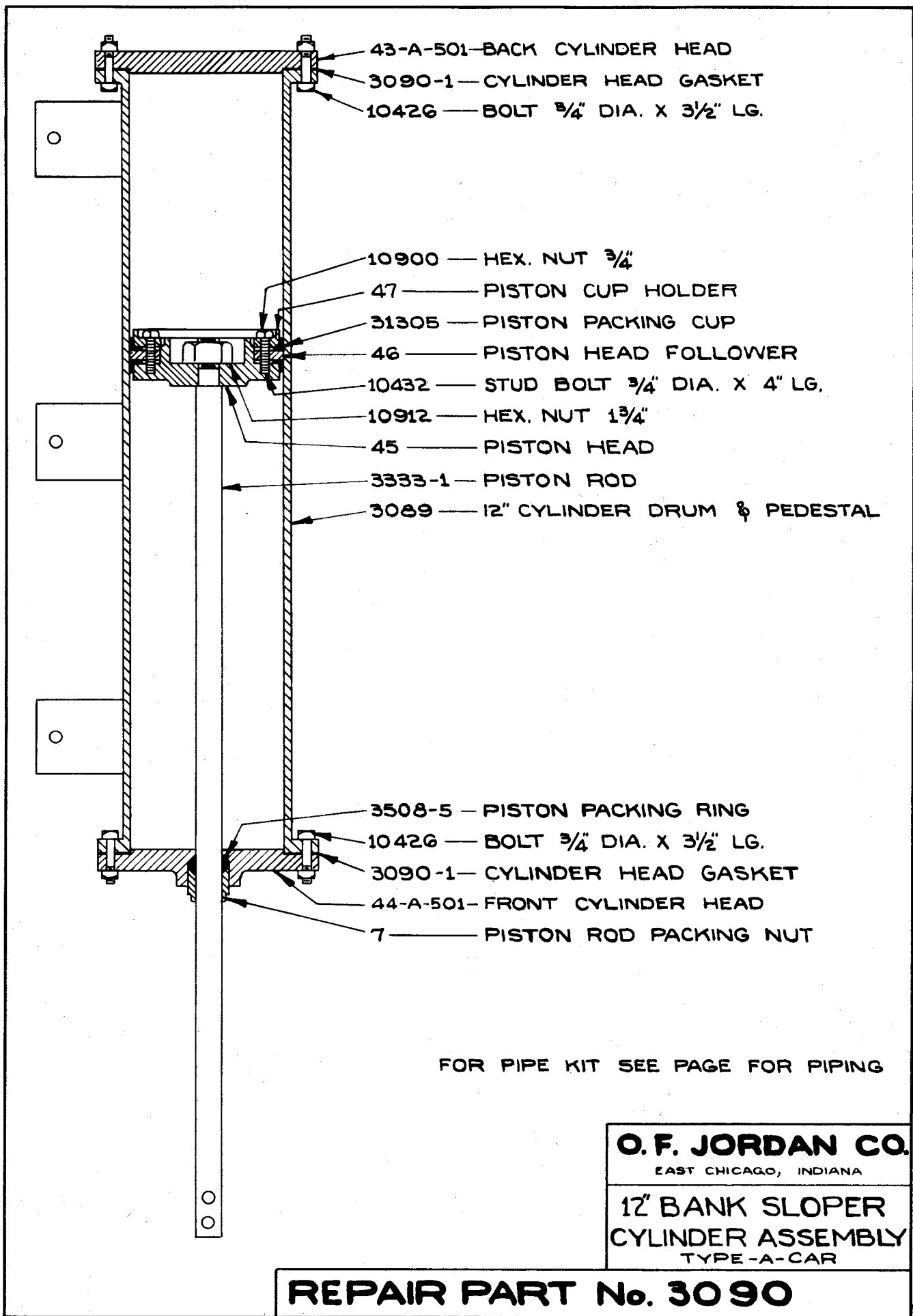
1112
1113

8'-0" TIE

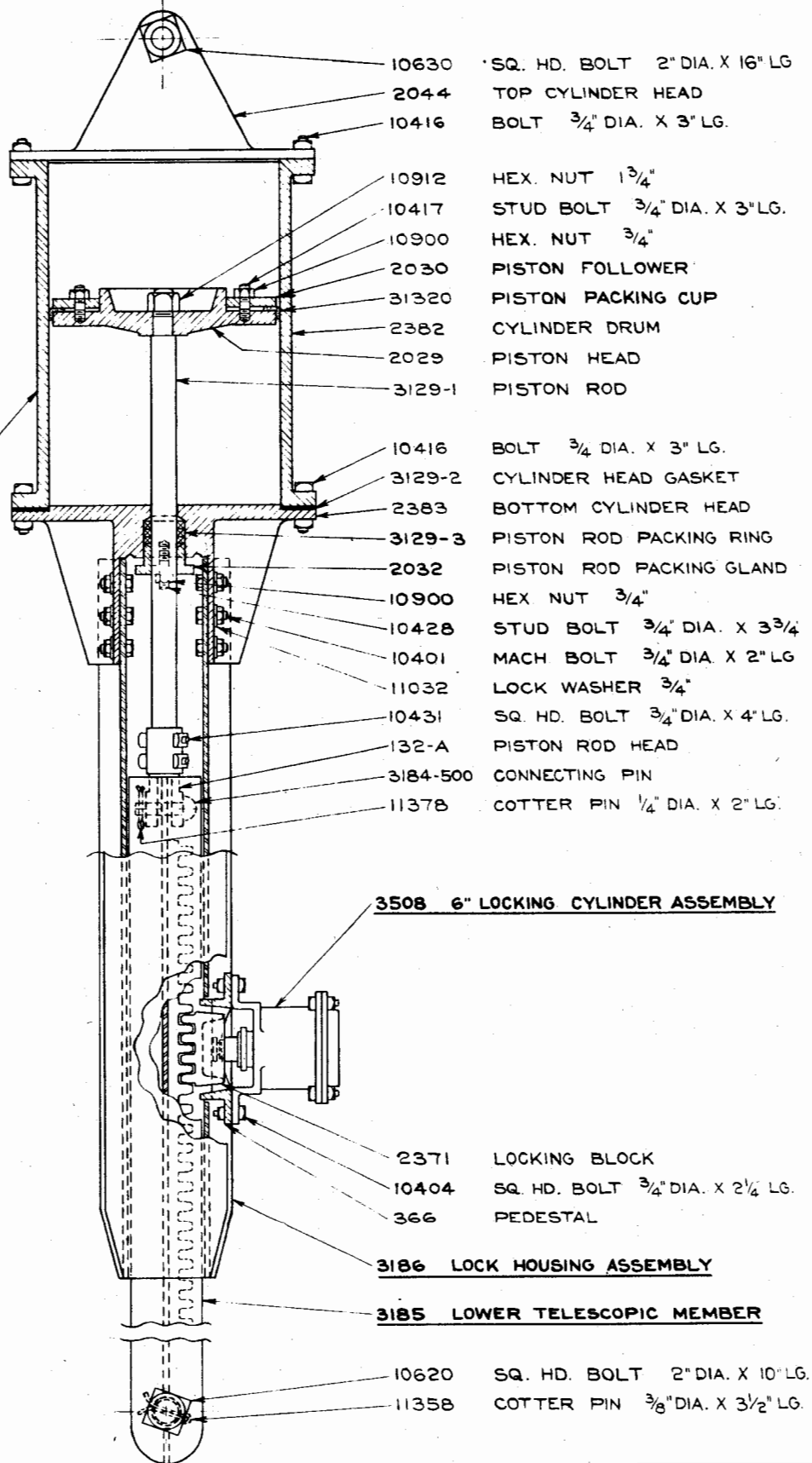


O. F. JORDAN CO.
EAST CHICAGO, INDIANA
**ICE CUTTER
ATTACHMENT**
TYPE "A" CAR

REPAIR PART No. 3010



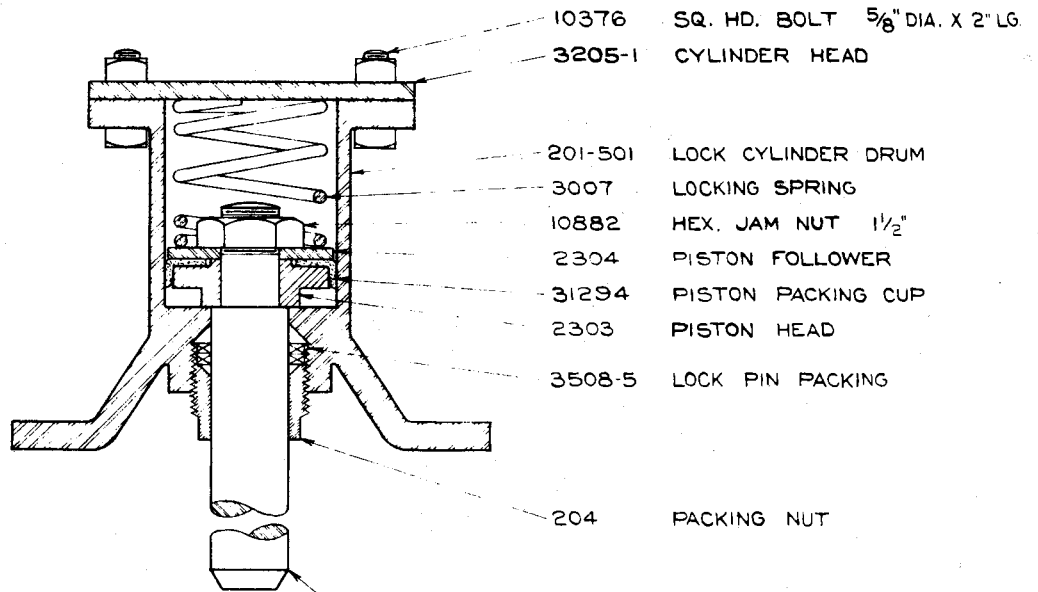
3129 19" CYLINDER ASSEMBLY ONLY



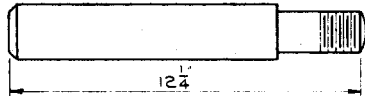
FOR PIPE KIT AND AIR HOSE SEE PAGE FOR PIPING.

O. F. JORDAN CO.
 EAST CHICAGO, INDIANA
 MAIN WING
 DIAGONAL BRACE
 ARRANGEMENT
 COMPLETE

REPAIR PART No. 3128



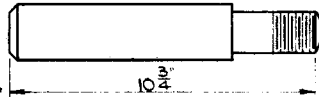
FOR CORRECT CYLINDER ASSEMBLY NUMBER AND LOCK PIN NUMBER REFER TO DETAILS SHOWN AT LEFT.



3205-2 LOCK PIN FOR STANDARD TYPE CAR BANK SLOPER WING

USED ON CARS SERIAL NO. 1026 AND UP

3205-500 LOCK CYLINDER ASSEMBLY EQUIPPED WITH THE ABOVE LOCK PIN

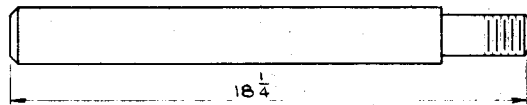


3205-3 LOCK PIN FOR TYPE "A" CAR BANK SLOPER WING AND MAIN WING DIAGONAL BRACE

USED ON CARS SERIAL NO. 700 AND UP

NOT USED ON DIAGONAL BRACE AFTER SERIAL NO. 759

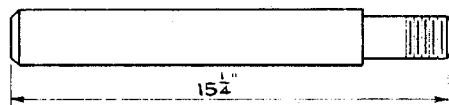
3205-501 LOCK CYLINDER ASSEMBLY EQUIPPED WITH THE ABOVE LOCK PIN



3205-4 LOCK PIN FOR TYPE "A" CAR FRONT PLOW

USED ON CARS SERIAL NO 700 TO 786 (ONLY)

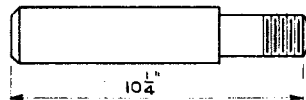
3205-502 LOCK CYLINDER ASSEMBLY EQUIPPED WITH THE ABOVE LOCK PIN



3205-5 LOCK PIN FOR TYPE "A" CAR FRONT PLOW

USED ON CARS SERIAL NO 787 AND UP

3205-503 LOCK CYLINDER ASSEMBLY EQUIPPED WITH ABOVE LOCK PIN



3205-6 LOCK PIN FOR STANDARD TYPE CAR BANK SLOPER WING

USED ON CARS SERIAL NO. 571 TO 1023 (ONLY)

3205-504 LOCK CYLINDER ASSEMBLY EQUIPPED WITH THE ABOVE LOCK PIN

O. F. JORDAN CO.

EAST CHICAGO, INDIANA

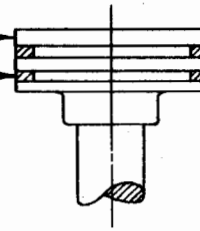
4 1/2" LOCK CYLINDER ASSEMBLY

FOR PIPE KIT SEE PAGE FOR PIPING.

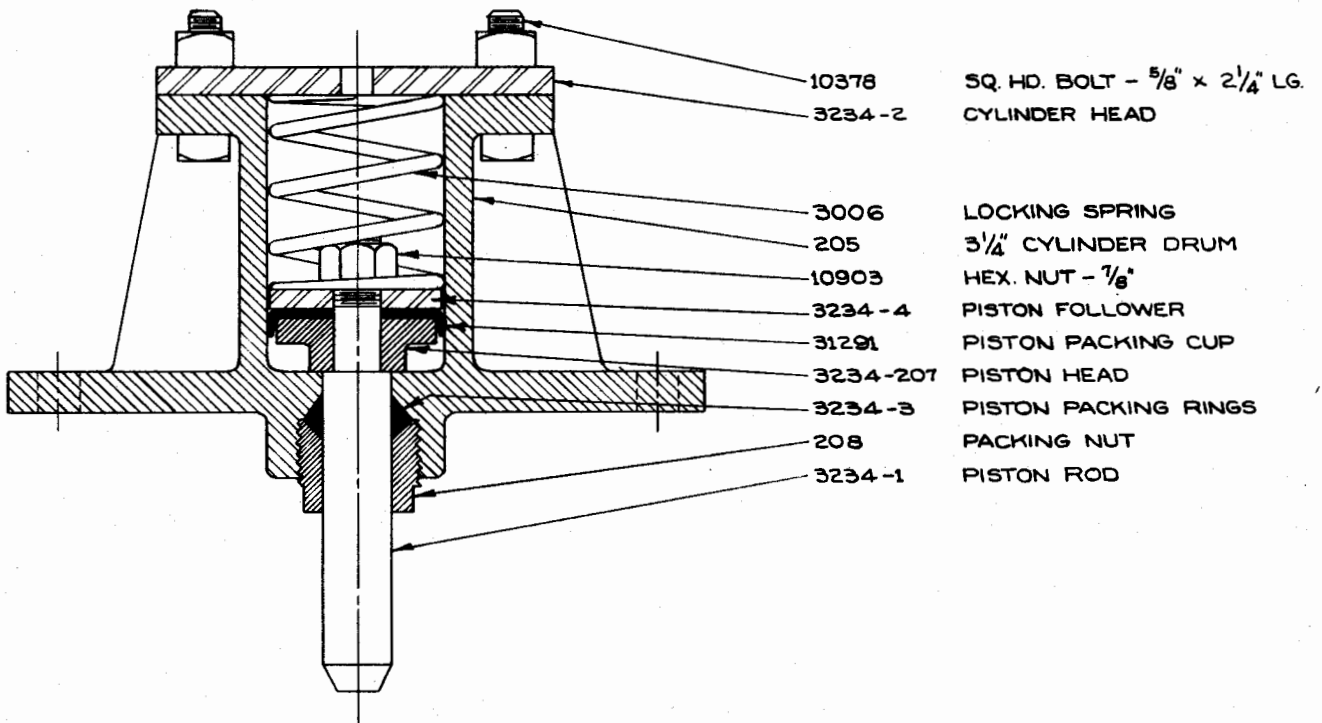
REPAIR PART No. 3205

207
31265

PISTON HEAD
PISTON RINGS



PISTON HEAD WITH RINGS



- 10378 SQ. HD. BOLT - $\frac{5}{8}$ " x $2\frac{1}{4}$ " LG.
- 3234-2 CYLINDER HEAD
- 3006 LOCKING SPRING
- 205 $\frac{3}{4}$ " CYLINDER DRUM
- 10903 HEX. NUT - $\frac{7}{8}$ "
- 3234-4 PISTON FOLLOWER
- 31291 PISTON PACKING CUP
- 3234-207 PISTON HEAD
- 3234-3 PISTON PACKING RINGS
- 208 PACKING NUT
- 3234-1 PISTON ROD

$\frac{3}{4}$ " LOCK CYLINDER ASSEMBLY 3234-501
ILLUSTRATING PISTON HEAD WITH PACKING CUP

FOR PIPE KIT AND AIR HOSE SEE PAGE FOR PIPING.

O. F. JORDAN CO.
EAST CHICAGO, INDIANA

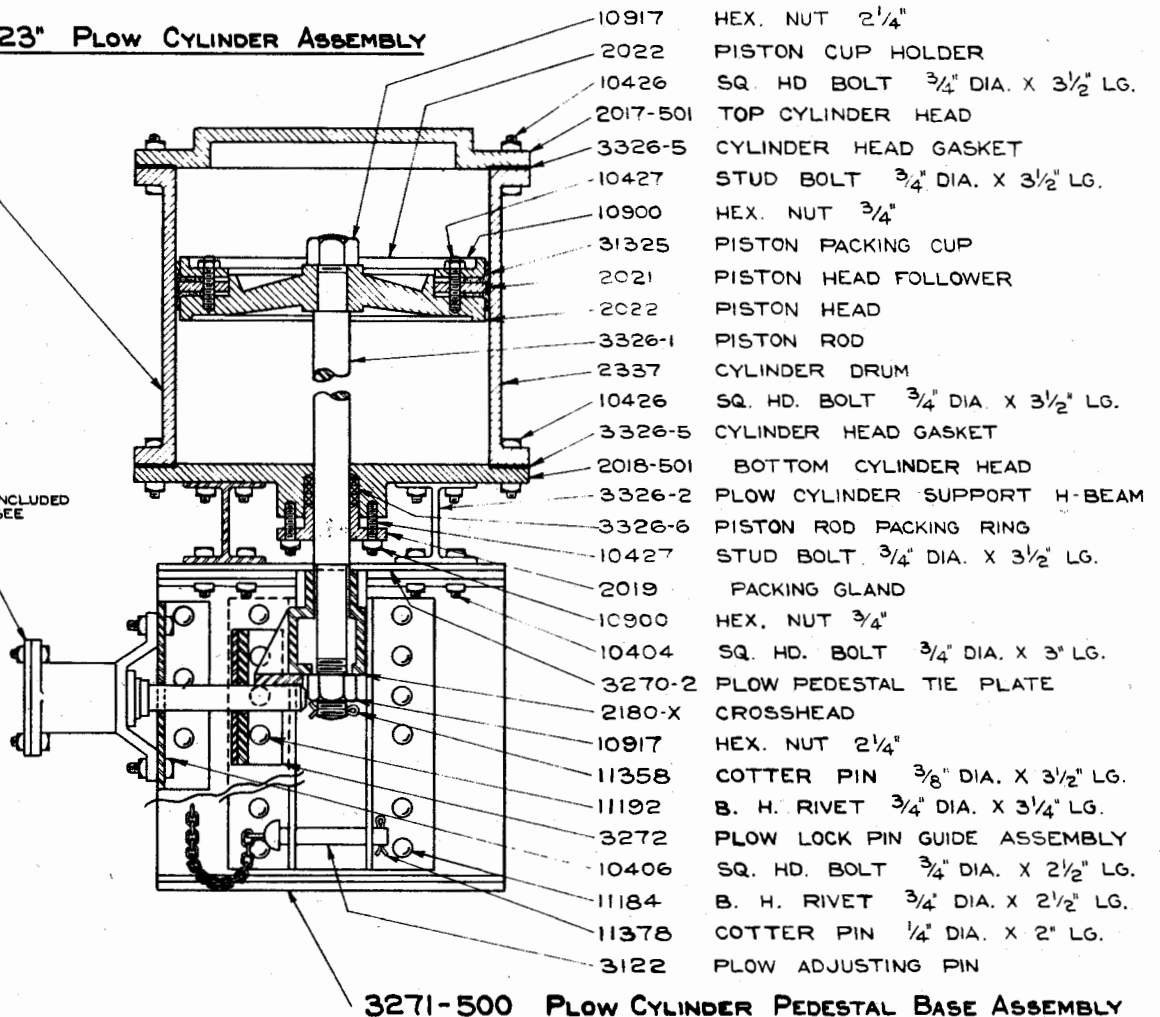
$\frac{3}{4}$ " LOCK CYLINDER
ASSEMBLY

REPAIR PART No. 3234

3326 23" PLOW CYLINDER ASSEMBLY

NOTE:-

4 1/2" LOCK CYLINDER
NO. 3205-503 NOT INCLUDED
IN THIS ASSEMBLY SEE
SHEET NO. 3205.



- 10917 HEX. NUT 2 1/4"
- 2022 PISTON CUP HOLDER
- 10426 SQ. HD BOLT 3/4" DIA. X 3 1/2" LG.
- 2017-501 TOP CYLINDER HEAD
- 3326-5 CYLINDER HEAD GASKET
- 10427 STUD BOLT 3/4" DIA. X 3 1/2" LG.
- 10900 HEX. NUT 3/4"
- 31325 PISTON PACKING CUP
- 2021 PISTON HEAD FOLLOWER
- 2022 PISTON HEAD
- 3326-1 PISTON ROD
- 2337 CYLINDER DRUM
- 10426 SQ. HD. BOLT 3/4" DIA. X 3 1/2" LG.
- 3326-5 CYLINDER HEAD GASKET
- 2018-501 BOTTOM CYLINDER HEAD
- 3326-2 PLOW CYLINDER SUPPORT H-BEAM
- 3326-6 PISTON ROD PACKING RING
- 10427 STUD BOLT 3/4" DIA. X 3 1/2" LG.
- 2019 PACKING GLAND
- 10900 HEX. NUT 3/4"
- 10404 SQ. HD. BOLT 3/4" DIA. X 3" LG.
- 3270-2 PLOW PEDESTAL TIE PLATE
- 2180-X CROSSHEAD
- 10917 HEX. NUT 2 1/4"
- 11358 COTTER PIN 3/8" DIA. X 3 1/2" LG.
- 11192 B. H. RIVET 3/4" DIA. X 3 1/4" LG.
- 3272 PLOW LOCK PIN GUIDE ASSEMBLY
- 10406 SQ. HD. BOLT 3/4" DIA. X 2 1/2" LG.
- 11184 B. H. RIVET 3/4" DIA. X 2 1/2" LG.
- 11378 COTTER PIN 1/4" DIA. X 2" LG.
- 3122 PLOW ADJUSTING PIN

3271-500 PLOW CYLINDER PEDESTAL BASE ASSEMBLY

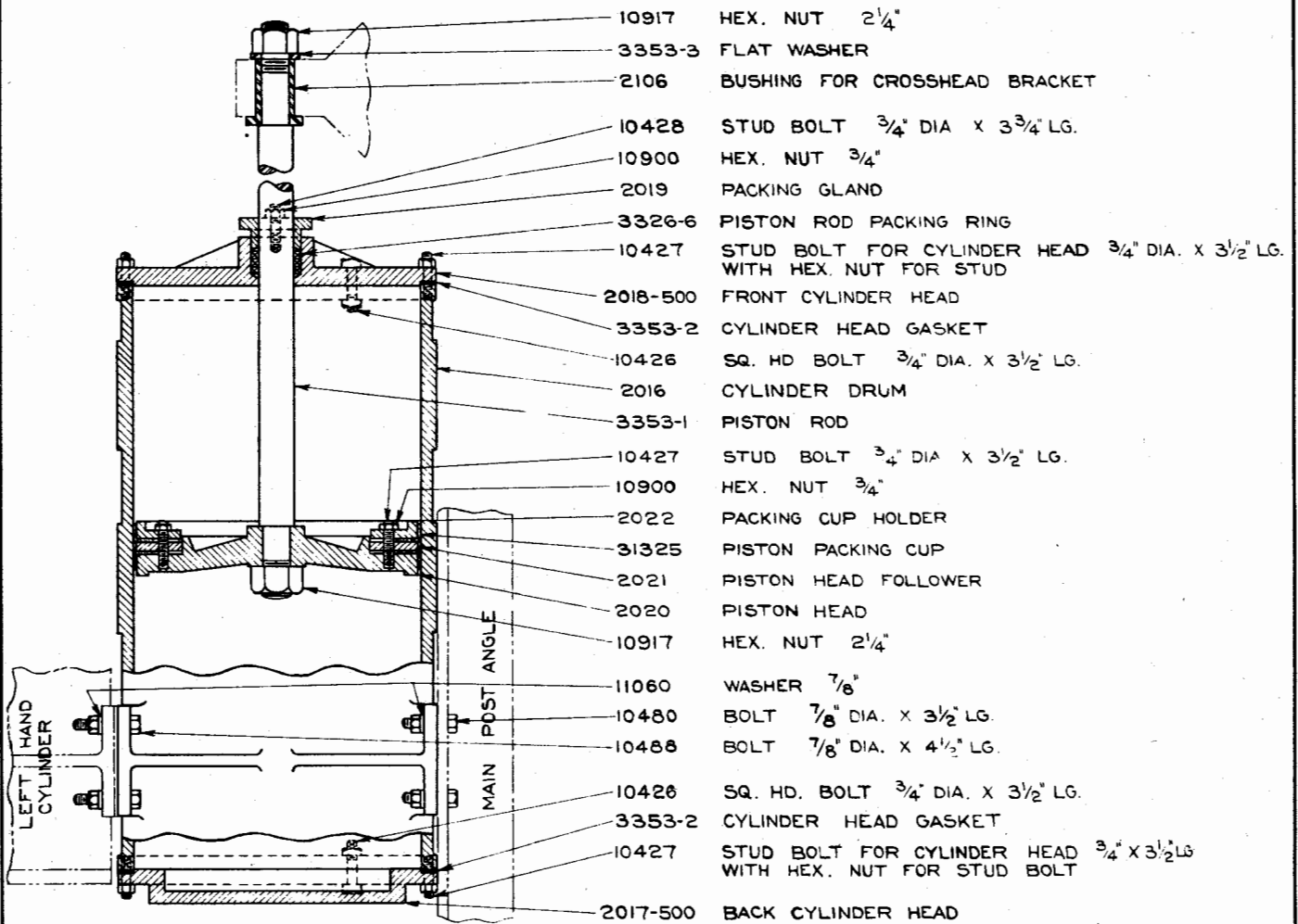
FOR PIPE KIT SEE PAGE FOR PIPING.

O. F. JORDAN CO.

EAST CHICAGO, INDIANA

**23" PLOW CYLINDER
AND
PEDESTAL ASSEMBLY**

REPAIR PART No. 3270-500



FOR PIPE KIT SEE PAGE FOR PIPING.

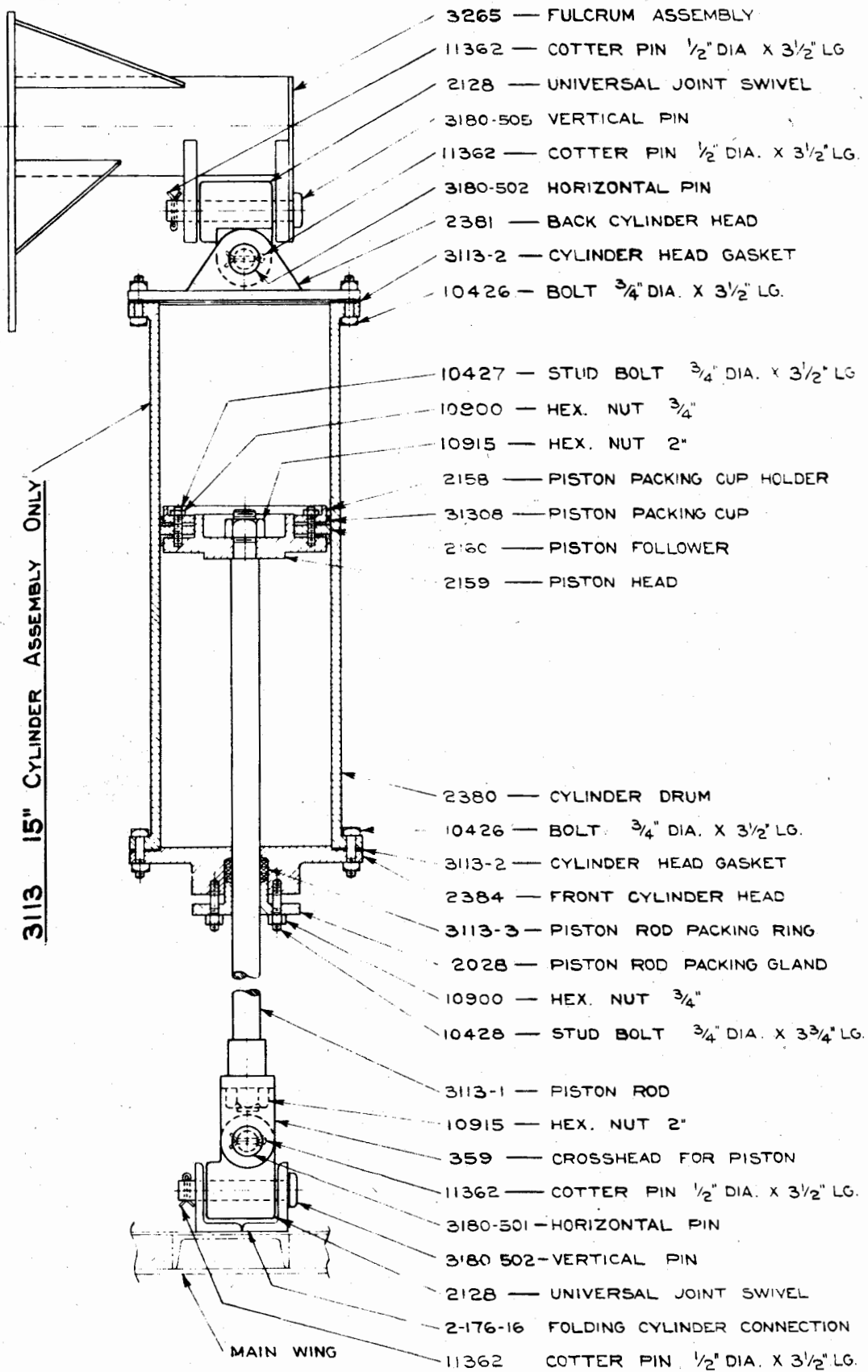
O. F. JORDAN CO.

EAST CHICAGO, INDIANA

**23" CYLINDER ASSEMBLY
FOR MAIN WING
RAISING AND LOWERING
COLUMN POST**

REPAIR PART No. 3353

3113 15" CYLINDER ASSEMBLY ONLY



MAIN WING

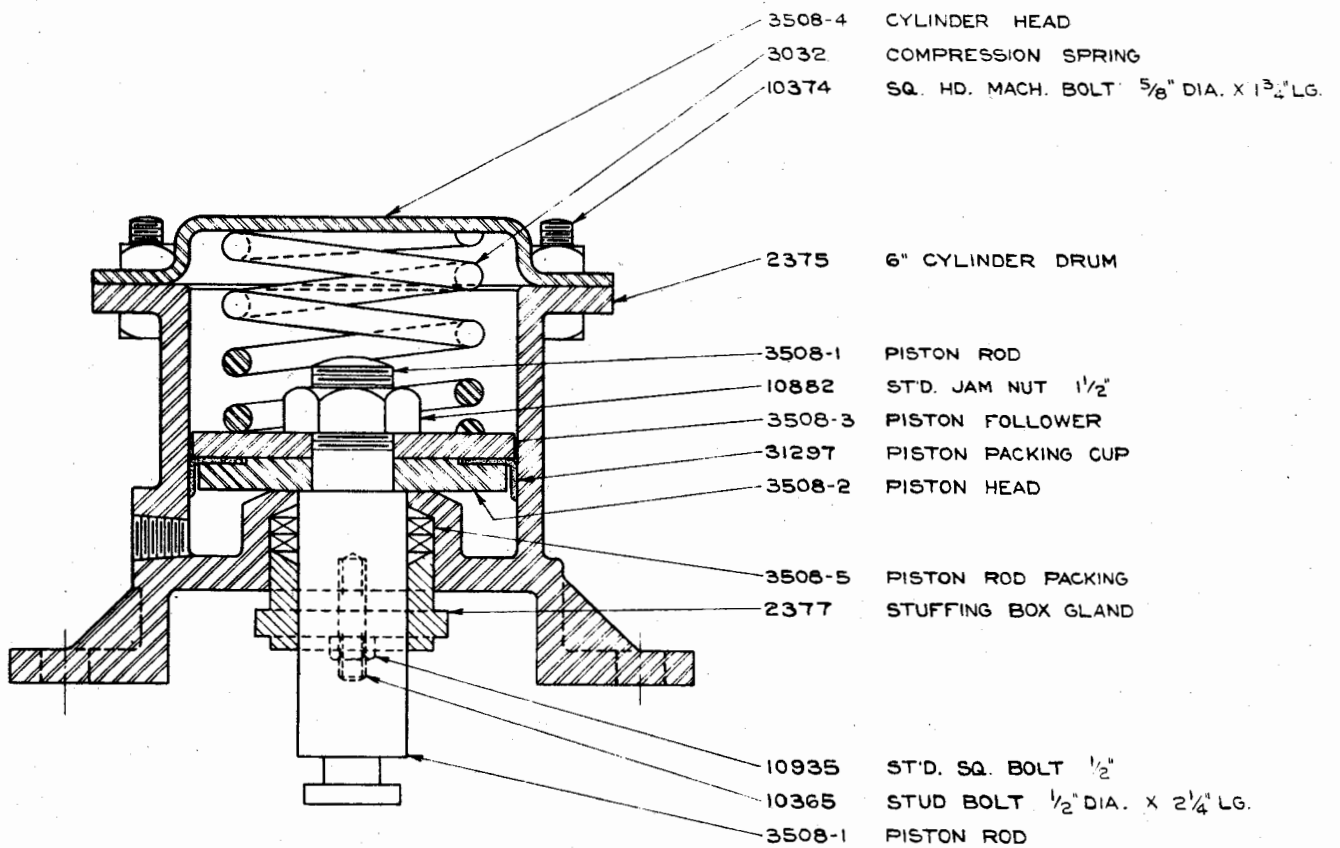
FOR PIPE KIT AND AIR HOSE SEE PAGE FOR PIPING.

O. F. JORDAN CO.

EAST CHICAGO, INDIANA

MAIN WING
 OPENING AND CLOSING
 ARRANGEMENT
 COMPLETE

REPAIR PART No. 3392-501



FOR PIPE KIT SEE PAGE FOR PIPING.

O. F. JORDAN CO.
 EAST CHICAGO, INDIANA

**6" LOCK CYLINDER
 ASSEMBLY**

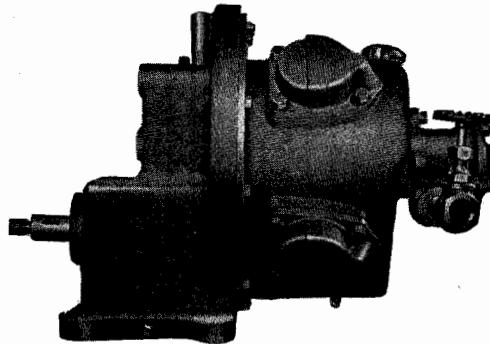
REPAIR PART No. 3508

Form No. 5619
Third Edition
May, 1953

GEARED AIR MOTORS

SIZES E3G, EE3G, E9G AND EE9G (Four Cylinder)
SIZES E53G, EE53G, E59G AND EE59G (Five Cylinder)

Instructions and Duplicate Part List



Size E3G Geared Motor

NOTE:—When ordering Spare Parts, please give the **SIZE** and **SERIAL NUMBER** of the motor as well as the **NAME** and **NUMBER** of the part required as shown in the list.

Parts can be ordered from the nearest Branch Office or Agent.

Ingersoll-Rand Motors cannot be guaranteed if repaired with other than Ingersoll-Rand repair parts.

IF NECESSARY TO SEND A MOTOR TO THE FACTORY FOR REPAIRS INQUIRE AT OUR NEAREST BRANCH OFFICE FOR SPECIAL INSTRUCTIONS.

SEE LAST PAGE FOR ADDRESSES.

Ingersoll-Rand

INSTRUCTIONS

This booklet contains information that will help you receive the utmost service from your Ingersoll-Rand Geared Air Motors. Complete instructions for disassembling and assembling the Motors and a duplicate part list for ordering repair parts are contained herein. Read it carefully; then preserve it for future reference. The illustrations on pages 9 and 10 show the part number and location of each part referred to in the text.

1. LUBRICATION

a. Lubricants

The recommended lubricants for the motor are as follows:

For temperatures 30°F. to 80°F., use Ingersoll-Rand Medium Oil No. 50 or S.A.E. 20 or 20W Motor Oil.

For temperatures above 80°F., use S.A.E. 30 Motor Oil.

For temperatures below 30°F., use S.A.E. 10 or 10W Motor Oil.

The recommended lubricants for the gearing are as follows:

For temperatures above 40°F., use Ingersoll-Rand Heavy Gear Grease No. 70 or a good soda base grease of No. 2 consistency.

For temperatures below 40°F., use Ingersoll-Rand Medium Gear Grease No. 75 or a good soda base grease of No. 1 Consistency.

b. Oil Level

Check the oil level daily as follows:

When the Motor is not subjected to freezing temperatures. After the Motor has been idle for several hours or overnight, open the Oil Cock (part 308), located at the bottom of the Motor Case (part 501), and allow the accumulated water to drain out. Close the Oil Cock at the bottom and open the one on the side of the Motor Case. Remove the Vent Cap (part 303) and pour a sufficient quantity of the recommended lubricant (paragraph 1-a) into the vent, to bring the level of oil up to the open Oil Cock. Close the upper Oil Cock.

When the Motor is subjected to freezing temperatures. Allow the Motor to remain idle long enough for the water content of the Motor Case to separate from the oil, but not long enough for it to freeze. Drain the water and replenish the oil as in the preceding paragraph. Should this procedure be impractical, drain the entire contents of the Motor Case immediately after operation

ceases, and refill it before resuming operation. If the Motor Case is not drained, a sufficient quantity of water will eventually accumulate so that the Oil Splasher (part 540) which is attached to the Crank (part 516) will freeze fast.

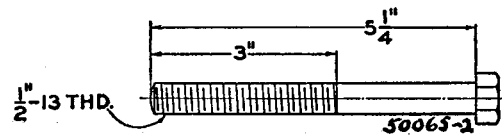
2. AIR SUPPLY

Keep the air line as free from dirt and moisture as possible. Blow all accumulated moisture out of the air line before starting the Motor.

We recommend the use of an air strainer as near the Motor as possible, to prevent dirt and scale from reaching the Motor.

3. VALVE CHEST

The Valve Chest (part 545) should be removed from the Motor Case (part 501) only if replacement of either the Valve Chest or the Rotary Valve Bushing (part 525) is necessary. To remove the Valve Chest from the Motor Case, the use of Jack Bolts is recommended. Jack Bolts can be purchased from Ingersoll-Rand (see Maintenance Tool No. 932 on page 14) or can be made according to the dimensions shown in the following illustration.



Valve Chest Jack Bolts

a. Removal

Using a suitable wrench, unscrew and remove the four Valve Chest Screws (part 548 and 549) and Washers (part 321) from the Valve Chest (part 545). Lift the Valve Chest Cover (part 546) from the Valve Chest.

Screw a bolt, $\frac{3}{4}$ "-10 thread on the four cylinder Motors; $\frac{7}{8}$ "-9 thread on the five cylinder Motors, into the tapped hole in the end of the Rotary Valve (part 526) and pull it from the Rotary Valve Bushing (part 525).

Screw a No. 932 Valve Chest Jack Bolt into the tapped hole in the lug, located on each side of the Valve Chest, until it contacts the Motor Case (part 501). Turn each Jack Bolt, a little at a time, until the Rotary Valve Bushing is withdrawn from the Motor Case.

b. Disassembly

Caution:—The Rotary Valve Bushing must be pressed from the Valve Chest exactly as directed. Pressing it out of the Cover side

of the Chest, or using an arbor that will not clean the Bushing Key (part 538) that protrudes from the wall of the Chest into the slot in the Bushing, will result in the Key being sheared off.

Support the face of the Chest that contacts the Motor Case and, using an arbor that will clear the Bushing Key, press the Bushing from the Chest.

c. **Assembly**

Support the face of the Valve Chest (part 545) that contacts the Valve Chest Cover (part 546). Align the keyway in the Rotary Valve Bushing (part 525) with the Bushing Key (part 538) that protrudes into the bore of the Chest. Using a suitable arbor, press the Bushing into the Chest until it is flush with the supported face of the Chest.

d. **Installation**

Start the protruding end of the Rotary Valve Bushing (part 525), squarely into the bore in the Motor Case (part 501), aligning the bolt holes in the Chest with the tapped holes in the Motor Case. Place a wood block on the faces of the Valve Chest and the Rotary Valve Bushing. Being sure to maintain the alignment, and keeping the Bushing square in the bore, drive in the Bushing until the Valve Chest contacts the Motor Case face.

Check the fit of the Rotary Valve (part 526) in the Rotary Valve Bushing (part 525).

Note:—Rotary Valve Bushings furnished as repair parts are accurately sized at the factory and if carefully installed, reaming or lapping is seldom necessary to obtain a good running fit between the Rotary Valve and Bushing. However, if the Bushing does "close-in" slightly when it is pressed into the Valve Chest and Motor Case, it will be necessary to either ream the Bushing to size or lap the Valve into the Bushing to obtain the necessary fit.

If reaming or lapping is necessary, completely disassemble the motor (paragraph 4-a and b.)

For Sizes E3G, EE3G, E9G and EE9G, ream the Rotary Valve Bushing 1.625" diameter.

For Sizes E53G, EE53G, E59G and EE-59G, ream the Rotary Valve Bushing 1.875" diameter.

Caution:—Remove all chips after reaming. When lapping the Valve in the Bushing, use a mild, fine-grained compound whose abrasive agent will break up rapidly.

Caution:—After lapping, wash the parts thoroughly in kerosene or other solvent to

remove all trace of the compound.

On Sizes E3G, EE3G, E9G and EE9G Motors, a single Valve Drive Pin (part 527) is located in the front end (hub end) of the Rotary Valve. On Sizes E53G, EE53G, E59G and EE59G, there are two Valve Drive Pins, Small (part 627) in addition to the No. 527 Valve Drive Pin, Large. Align the Valve Drive Pin (or Pins) with the drive hole (or holes) in the Crank (part 516) and insert the Valve into the Bushing.

Place the Valve Chest Cover (part 546) on the Valve Chest, aligning the holes in the Cover with those in the Chest. Using a suitable wrench, screw the two Valve Chest Screws, Long (part 548) into the two bottom holes in the Chest. Screw the two Valve Chest Screws, Short (part 549) into the two remaining holes in the Valve Chest. Use a Lock Washer (part 321) with each Valve Chest Screw.

4. **MOTOR**

a. **Removal**

Open the Oil Cock (part 308), located at the bottom of the Motor Case (part 501), and drain all the oil from the Motor Case.

Unscrew and remove the eight Motor Case Screws (part 312) from the Motor Case and lift the Motor Complete (part A501) from the Gear Box (part 750).

b. **Disassembly**

Unscrew and remove the four Cylinder Cap Screws (part 506) and Washers (part 504) from one of the Cylinders (part 505). Pull the Cylinder from the Motor Case (part 501). Rotate the Crank until the Piston exposed is at top dead center. Push the Piston Wrist Pin (part 514) out of the Piston and lift the Piston off the Connecting Rod (part 509). Repeat this process on each Cylinder until all Cylinders and Pistons are removed.

With all the Pistons removed, only the fit of the Crank Bearing (part 518) retains the Crank assembly in the Motor Case. In most instances the Crank assembly can be removed by pulling on it while tapping the face of the Motor Case, lightly, with a soft hammer. Should this method fail to loosen the Bearing remove the Rotary Valve (part 525) from the Valve Chest (part 545) (paragraph 3-b), and insert a brass rod or hardwood arbor through the bore of the Rotary Valve Bushing (part 525) and against the end of the Crank. Drive on the rod until the Crank assembly is loose. Tilt the Crank assembly and lift it from the Motor Case.

Loosen the Crank Pinch Bolt (part 521), straighten the split end of the Crank Taper Pin (part 520) and drive it out of the Crank (part 516). Separate the two sections of the Crank and remove the Connecting Rod Rings (part 510), Connecting Rods (part 509), Connecting Rod Bushing (part 511) and Crank Pin Sleeve (part 519), from the Crank.

Only if replacement is necessary, pry the Crank Bearing (part 518) from each section of the Crank.

c. **Assembly**

Note:—The two sections of the Crank (part 516) are matched before final machining, and the web of each section is stamped with an identification mark such as AA17, CC21, XX19, etc. Only sections bearing identical markings can be used together. If two or more Cranks are disassembled at one time, check the web of each section before re-assembly and make sure that only matched parts are used together.

Slide the Crank Pin Sleeve (part 519), plain end first (there is a tang on one end), over the Crank pin. Slide the Connecting Rod Bushing (part 511) over the Sleeve. Place one of the Connecting Rod Rings (part 510) radius end last, over the Bushing.

Place the Connecting Rods (part 509) around the Bushing, entering the foot on each Rod into the space between the Bushing and the Ring. Slide the other Connecting Rod Ring, radius end first, over the feet on the Rods.

Join the two sections of the Crank, so that the tang on the Crank Pin Sleeve enters the slot in the Crank web, and the holes for the Crank Taper Pin are aligned.

Drive the Crank Taper Pin (part 520) into the aligned holes in the two sections of the Crank. Then tighten the Crank Pinch Bolt (part 521) and spread the split end of the Pin.

Using a sleeve that will contact only the inner ring of the Bearing, press a Crank Bearing (part 518) onto each end of the Crank until it seats against the shoulder.

Install the Crank assembly in the Motor Case, seating the Crank Bearing in the recess in the Case.

Rotate the Crank until one Connecting Rod (part 509) is at top dead center. Place a Piston (part 513) on this Connecting Rod and retain it by installing the Piston Wrist Pin (part 514). Place a Cylinder Gasket (part 507) over the small diameter and

against the flange on the Cylinder (part 505). Slide the Cylinder over the Piston and into the Motor Case.

Note:—The Piston Ring (part 337) (compression ring near the top of the Piston) can be compressed sufficiently with the fingers to enter it into the Cylinder. It is also possible to start the Oil Regulating Ring (part 338) with the fingers, but it is very difficult and there is danger of breaking the Ring if it is not uniformly started into the Cylinder. It is recommended that a Piston Ring Compressor be used. One can be purchased from Ingersoll-Rand (See maintenance Tool No. 933 on page 14) or one can be made from $\frac{1}{16}$ " spring steel, about $\frac{3}{4}$ " wide, bent into circular shape of such size that it can be slipped over the Piston to hold the Ring compressed into its groove.

Retain the Cylinder on the Motor Case with four Cylinder Cap Screws (part 506) and Washers (part 504) (copper washer). Repeat this process until all the Cylinders are installed.

d. **Installation**

Place the Motor Case Gasket (part 592) on the face of the Motor Case. Enter the spline on the Motor Pinion (part 752) into the spline-broached section of the Crank and slide the Gear Box (part 750) and the Motor Case together. Retain with the eight Motor Case Screws (part 312) and Lock Washers (part 321).

5. **GEAR BOX**

a. **Removal**

Remove the Motor Complete (part A501) from the Gear Box (part 750) (paragraph 4-a).

b. **Disassembly**

Unscrew the Drain Plug (part 351) and drain the grease from the Gear Box (part 750).

Screw a $\frac{3}{8}$ "-16 thread cap screw into each of the two tapped holes, located on the bolt circle of the Motor Case Cover (part 751) and, using them as jack bolts, remove the Motor Case Cover from the Gear Box.

On Sizes E3G, EE3G, E53G and EE53G, tap the end of the Drive Shaft (part 757) with a soft hammer to drive this assembly from the Gear Box.

On Sizes E9G, EE9G, E59G and EE59G, pry the Intermediate Gear (part 364), Drive Gear (part 756) and their assembled parts, out of the Gear Box. Both Gears should be removed simultaneously.

On all Sizes, tap the Gear Box with a soft hammer while pulling on the Motor Pinion (part 752) to remove the Pinion and Motor Pinion Bearing (part 754) from the Gear Box.

Remove the Drive Shaft Packing (part 759) from the Bearing recess in the Gear Box. Inspect the Packing for wear or damage. If it is not serviceable, replace it with a new part during assembly.

Inspect the Motor Pinion Bearing for wear or damage. **The Bearing should be removed from the Motor Pinion only if replacement of either the Bearing or Pinion is required.** If the Bearing is damaged or worn, clamp its outer ring in a vise and, using a suitable rod or punch, drive the Motor Pinion from the Bearing.

If the Motor Pinion is to be replaced, it is recommended that a new Bearing also be installed.

Unscrew and remove the Bearing Screw (part 769) from the end of the Drive Shaft (part 757). On Sizes E9G, EE9G, E59G and EE59G, loosen the Drive Gear Set Screw (part 52) which is located in the Drive Gear hub.

Place the Drive Shaft assembly on the table of an arbor press, supporting it by the Drive Gear so that the externally threaded end of the Shaft is down. Using a suitable arbor placed against the internally threaded end of the Shaft, press the Shaft from the Drive Gear Inner Bearing (part 762) and the Drive Gear. Remove the Drive Gear Key (part 758) from the Drive Shaft.

On Sizes E3G, EE3G, E53G, and EE53G. Slide the Drive Shaft Bearing Spacer (part 761) and Oil Washer (part 770) from the Drive Shaft. Stand a sleeve, 1.625" inside diameter and 4½" long, on the table of an arbor press. Insert the externally threaded end of the Drive Shaft into the sleeve. Press on the internally threaded end of the Drive Shaft until the Bearing is loose on the Shaft. Slide the Bearing and the Drive Shaft Packing Washer (part 780) from the Drive Shaft.

On Sizes E9G, EE9G, E59G and EE59G. Slide the Oil Washer (part 770) from the Drive Shaft. Stand a sleeve, 1.875" inside diameter and 4½" long, on the table of an arbor press. Insert the externally threaded end of the Drive Shaft into the sleeve. Press on the internally threaded end of the Drive Shaft until the Bearing is loose on the Shaft.

Slide the Bearing and Drive Shaft Packing Washer (part 780) from the Drive Shaft.

Unscrew and remove the Bearing Screw (part 769) from the Intermediate Shaft (part 365). Stand a sleeve, 1 13/16" inside diameter and 6" long, on the table of an arbor press. Stand the Intermediate Gear assembly on the sleeve, with the inner ring of the Intermediate Gear Outer Bearing (part 367) contacting the sleeve. Using a 7/8" arbor against the internally threaded end of the Intermediate Shaft, press the Intermediate Shaft out of the Intermediate Gear Inner Bearing (part 366), Bearing Liner (part 35), Intermediate Gear (part 364), Intermediate Gear Spacer (part 369) and the Intermediate Gear Outer Bearing.

On all Sizes wash all parts in kerosene or other petroleum solvent, removing all old grease to enable a thorough inspection of parts for cracks or burrs. Inspect all Bearings for wear or damage, and all Gears for chipped or worn teeth. Replace worn or damaged parts with new parts before proceeding with assembly.

c. **Assembly**

The Drive Shaft Packing (part 759) rides on the surface of the largest diameter on the Drive Shaft (part 757). Inspect this surface for rough spots. Smooth any nicks or burrs with an oil stone. Wash the Shaft thoroughly after stoning.

Stand a sleeve, 1 5/8" inside diameter and 7" long, on the table of an arbor press. Place the Drive Shaft Outer Bearing (part 763), shield side up, on the sleeve, with the inner ring of the Bearing contacting the sleeve. Slide the Drive Shaft Packing Washer (part 780) over the internally threaded end of the Drive Shaft and against the flange. Insert the internally threaded end of the Drive Shaft through the Bearing bore. Slide a piece of 3/4" pipe, 1 1/4" long, over the externally threaded end of the Shaft and press the Shaft into the Bearing until the Bearing, the Packing Washer and the flange on the Shaft are in firm contact.

On Sizes E3G, EE3G, E53G and EE53G. Slip the Oil Washer (part 770), followed by the Drive Shaft Bearing Spacer (part 761) over the internally threaded end of the Drive Shaft. Install the Drive Gear Key (part 758) in the keyway in the Drive Shaft. Place the Drive Gear (part 756), short hub down, on the sleeve. Align the Key in the Shaft with the keyway in the Gear. Slide a piece of

$\frac{3}{4}$ " pipe, $1\frac{1}{4}$ " long, over the externally threaded end of the Shaft and press the Shaft into the Gear until the Bearing, the Oil Washer, the Spacer and the Gear are in firm contact. **Note:**—Occasionally, because of existing tolerances, the Gear may not be a tight press.

Note:—At one time the Drive Shaft Inner Bearing (part 762) was a radial-thrust type ball bearing on which the outer ring on one side is marked "Thrust Here". When re-assembling a Drive Shaft unit inspect the Inner Bearing and, if so marked, install it **unmarked side first** on the Shaft. Unless the Bearing is marked it can be installed either side first. Replacement Bearings furnished by Ingersoll-Rand will not be the radial-thrust type.

Support the inner ring of the Drive Shaft Inner Bearing (part 762) and press the internally threaded end of the Drive Shaft into the Bearing until the Gear hub contacts the inner ring. Using a suitable wrench, run the Bearing Screw (part 769) firmly into the tapped end of the Drive Shaft. Enter a punch into the hole in the Screw head and strike it a sharp blow with a hammer to lock the Screw in position.

On Sizes E9G, EE9G, E59G and EE59G.

Slip the Oil Washer (part 770) over the internally threaded end of the Drive Shaft and against the Bearing. Install the Drive Gear Key (part 758) in the keyway in the Drive Shaft. Place the Drive Gear (part 756), short hub down, on the sleeve. Insert the internally threaded end of the Drive Shaft into the Gear bore and align the Key in the Shaft with the keyway in the Gear. Slide a piece of $\frac{3}{4}$ " pipe, $1\frac{1}{4}$ " long, over the externally threaded end of the Shaft and press the Shaft into the Gear until the Bearing, Oil Washer and Gear are in firm contact. Securely tighten the Drive Gear Set Screw (part 52), located in the Drive Gear hub.

Note:—Occasionally, because of existing tolerances, the Gear may not be a tight press on the Shaft.

Note:—At one time the Drive Shaft Inner Bearing (part 762) was a radial-thrust type ball bearing on which the outer ring on one side is marked "Thrust Here". When re-assembling a Drive Shaft unit inspect the Inner Bearing and, if so marked, install it **unmarked side first** on the Shaft. Unless the Bearing is marked it can be installed either side first. Replacement Bearings furnished by Ingersoll-Rand will not be the

radial-thrust type.

Support the inner ring of the Drive Shaft Inner Bearing (part 762) and press the internally threaded end of the Drive Shaft into the Bearing until the Gear hub contacts the inner ring. Using a suitable wrench, run the Bearing Screw (part 769) firmly into the tapped end of the Drive Shaft. Enter a punch into the hole in the Screw head and strike it a sharp blow with a hammer to lock the Screw in position.

Stand a sleeve, $1\frac{7}{16}$ " inside diameter and 5" long on the table of an arbor press. Place the Intermediate Gear Outer Bearing (part 367), either side up, on the sleeve with the inner ring contacting the sleeve. Insert the small end of the Intermediate Shaft (part 365) through the Bearing bore and press on the large end of the Shaft until the flange seats on the inner ring of the Bearing. Remove the assembled Shaft and Bearing from the sleeve.

Place the Intermediate Gear (part 364), small diameter up, on the sleeve. Slip the Intermediate Gear Spacer (part 369) over the small end of the Intermediate Shaft and insert the Shaft into the Gear. Press the Shaft into the Gear until the Bearing, Spacer and Gear are in firm contact. Place the assembly on the press table, standing it upright on the large end of the Shaft. Start the Bearing Liner (part 35) squarely onto the small end of the Shaft and press it on until it seats against the shoulder. Start the Intermediate Gear Inner Bearing (part 366) squarely onto the Bearing Liner. Using an arbor that will contact only the inner ring, press the Bearing over the Liner until the inner ring of the Bearing contacts the face of the Intermediate Gear hub.

Using a suitable wrench, run the Bearing Screw (part 769) firmly into the tapped end of the Intermediate Shaft. Enter a small punch into the hole in the Screw head and strike it a sharp blow to lock the Screw in position.

On Sizes E3G, EE3G, E53G and EE53G.

If the Motor Pinion Bearing (part 754) was removed from the Motor Pinion (part 752), start the new Bearing, either side first, squarely into the recess in the wall of the shallow portion of the Gear Box. Using a sleeve that will contact only the outer ring drive the Bearing into the recess until it seats. Slip the Drive Shaft Packing (part 759) over the externally threaded end of the Drive Shaft (part 757) and up against

the Drive Shaft Packing Washer (part 780). Insert the externally threaded end of the Drive Shaft through the hole in the bottom of the Bearing recess, and align the Drive Shaft Outer Bearing with the Bearing recess. **Note:**—It is necessary to tilt the Drive Shaft assembly slightly toward the recess containing the Motor Pinion Bearing, in order to allow the teeth on the Drive Gear (part 756) to clear the flange on the Gear Box. Force the assembly into the Gear Box until the Drive Gear clears the flange on the Gear Box. Slip the assembly into alignment and drive it into the Gear Box until it seats. Engage the teeth on the Motor Pinion with those on the Drive Gear, entering the Pinion hub into the bore of the Motor Pinion Bearing. Using a soft hammer, drive the Pinion into the Bearing until it seats.

If the Motor Pinion Bearing was not removed from the Motor Pinion, install the Drive Shaft Packing on the Drive Shaft assembly and start the assembly into the Gear Box as explained in the preceding paragraph. Before forcing the Drive Shaft assembly past the flange on the Gear Box, engage the teeth on the Motor Pinion with those on the Drive Gear and align the Motor Pinion Bearing with the recess in the Gear Box. Install the two assemblies simultaneously, by driving on first one then the other until both are seated.

On Sizes E9G, EE9G, E59G and EE59G. **If the Motor Pinion Bearing (part 754) was removed from the Motor Pinion (part 752),** start the new Bearing, either side first, squarely into the recess in the wall of the shallow portion of the Gear Box. Using a sleeve that will contact only the outer ring, drive the Bearing into the recess until it seats. Slip the Drive Shaft Packing (part 759) over the externally threaded end of the Drive Shaft (part 757) and up against the Drive Shaft Packing Washer (part 780). Engage the teeth on the small diameter of the Intermediate Gear (part 364) with those on the Drive Gear (part 756). Insert the externally threaded end of the Drive Shaft into the hole in the bottom of the Drive Shaft Outer Bearing recess (part 763), and start both assemblies into the Gear Box. **Note:**—

It is necessary to tilt the assemblies slightly toward the recess containing the Motor Pinion Bearing, in order to allow the teeth on the Intermediate Gear to clear the flange on the Gear Box. Force the assemblies into the Gear Box until the Intermediate Gear clears the flange on the Gear Box. Slip the assemblies into alignment and drive them into the Gear Box until they seat.

Engage the teeth on the Motor Pinion with those on the Intermediate Gear, entering the Pinion hub into the bore of the Motor Pinion Bearing. Using a soft hammer, drive the Pinion into the Bearing until it seats.

If the Motor Pinion Bearing was not removed from the Motor Pinion, install the Drive Shaft Packing on the Drive Shaft and start the Drive Shaft and Intermediate Shaft assemblies into the Gear Box as explained in the preceding paragraphs. Before forcing the Intermediate Shaft assembly past the flange on the Gear Box, engage the teeth on the Motor Pinion with those on the Intermediate Gear. Align the Motor Pinion Bearing with the remaining recess in the Gear Box and install the three assemblies simultaneously by driving each one in a little at a time until all three are seated.

On all Sizes, inspect the Motor Pinion Packing (part 755), located in the bore of the center boss on the Motor Case Cover (part 751). If replacement is necessary, remove the damaged Packing and install a new one.

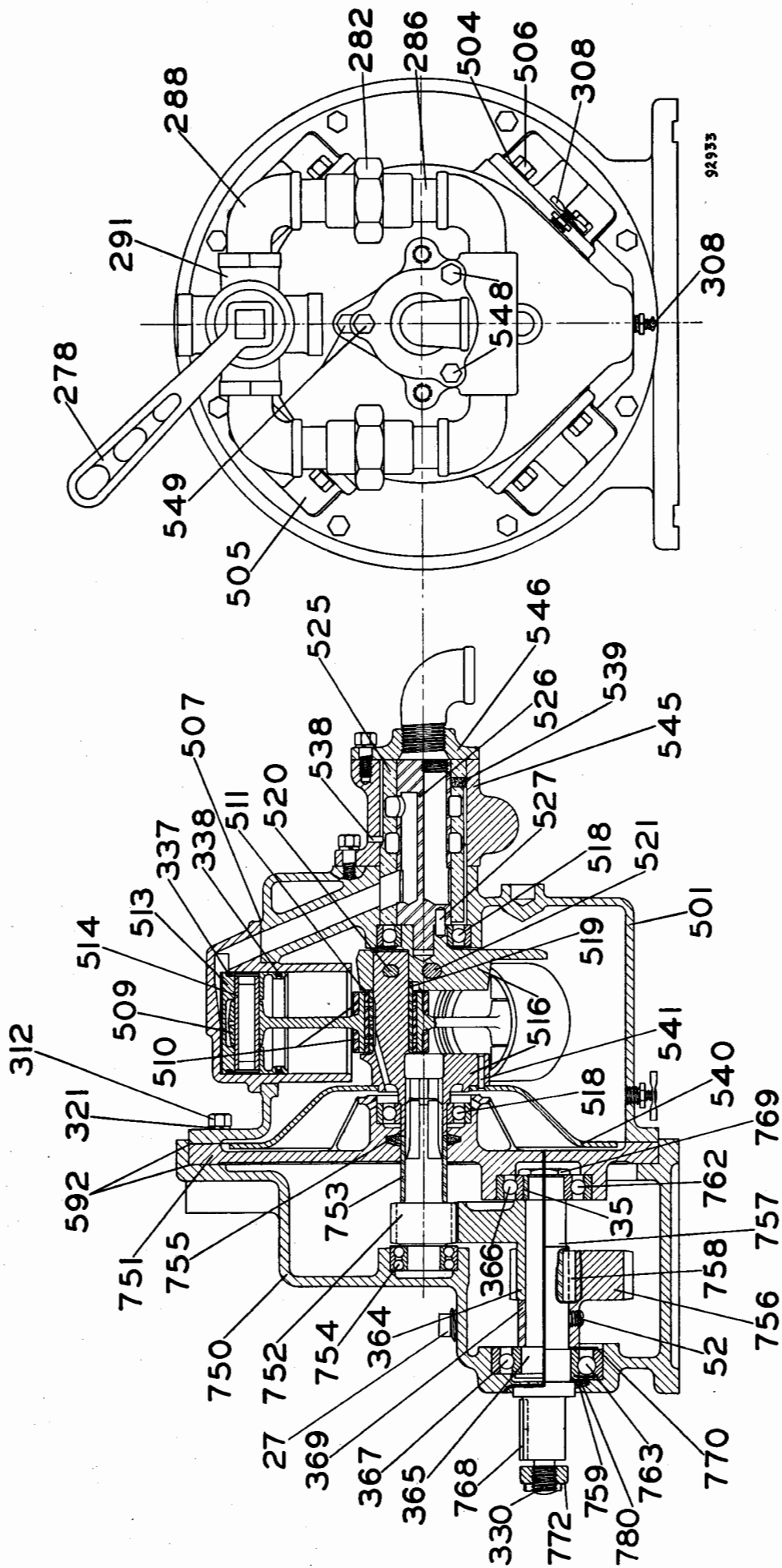
Insert the Motor Pinion Spacer (part 753), into the bore containing the Motor Pinion Packing, being careful not to damage the Packing. Allow the Spacer to extend about 1" out of the flat side of the Cover.

Using suitable blocking, support the Gear Box open face up and put five pounds of the recommended gear lubricant (paragraph 1-a) into it.

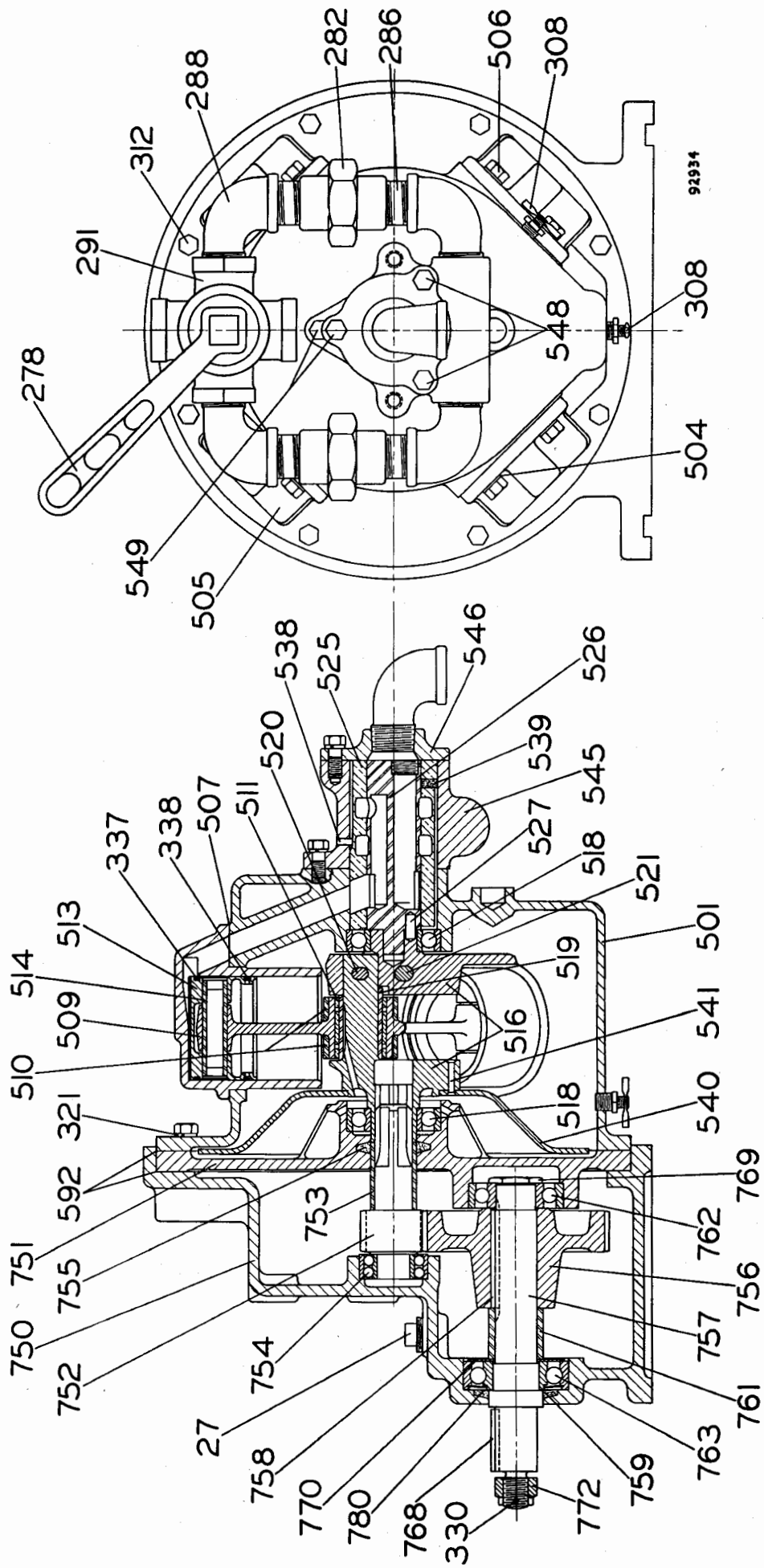
Place a Motor Case Cover Gasket (part 592) on the Gear Box flange and slide the Motor Case Cover (part 751) into position, tapping it with a soft hammer until it is seated.

d. **Installation**

Install the Motor Complete on the Gear Box (paragraph 4-d).



Size EE9G Motor



Size EEGG Motor

DUPLICATE PART LIST
For
INGERSOLL-RAND GEARED MOTORS

Part No.	Name of Part	E3G	EE3G	E53G	EE53G	E9G	EE9G	E59G	EE59G
27	Grease Plug.....	1	1	1	1	1	1	1	1
35	Bearing Liner.....	—	—	—	—	1	1	1	1
52	Drive Gear Set Screw.....	—	—	—	—	1	1	1	1
278	Air Valve Lever.....	—	1	—	1	—	1	—	1
282	Union.....	—	2	—	2	—	2	—	2
283	Globe Valve (not shown).....	1	—	1	—	1	—	1	—
284	Reducing Bushing (not shown).....	1	—	1	—	1	—	1	—
285	Globe Valve Nipple (not shown).....	1	—	1	—	1	—	1	—
286	Nipple.....	—	4	—	4	—	4	—	4
288	Street Elbow.....	—	5	—	5	—	5	—	5
291	Air Valve (includes part 278).....	—	1	—	1	—	1	—	1
303	Vent Cap (Push type) (used under serial 25,000).....	1	1	—	—	1	1	—	—
303	Vent Cap (threaded type) (includes parts 421, 889, 891, 892 and 893) (used over serial 25,000) (not shown).....	—	—	—	—	1	1	—	—
308	Oil Cock.....	1	1	1	1	1	1	1	1
312	Motor Case Screw (3/8"-16 thread, hex head cap screw, 1 3/4" long).....	2	2	2	2	2	2	2	2
321	3/8" Lock Washer.....	8	8	8	8	8	8	8	8
330	Drive Shaft Nut Cotter.....	12	12	12	12	12	12	12	12
337	Piston Ring.....	1	1	1	1	1	1	1	1
338	Oil Regulating Piston Ring.....	4	4	4	4	4	4	4	4
351	Grease Level Plug and Drain Plug (not shown).....	4	4	4	4	4	4	4	4
364	Intermediate Gear.....	2	2	2	2	2	2	2	2
365	Intermediate Shaft.....	—	—	—	—	1	1	1	1
366	Intermediate Gear Inner Bearing (Fafnir 306W, M.R.C. 306M, New Departure 1306, Federal 1306M or their equivalent).....	—	—	—	—	1	1	1	1
367	Intermediate Gear Outer Bearing (Fafnir 307W, M.R.C. 307M, New Departure 1307, Federal 1307M or their equivalent).....	—	—	—	—	1	1	1	1
368	Drain Plug (not shown).....	—	—	—	—	1	1	1	1
369	Intermediate Shaft Bearing Spacer.....	—	—	—	—	1	1	1	1
402	Oil Plug (not shown).....	1	1	1	1	1	1	1	1
421	S-Hook (not shown).....	1	1	1	1	1	1	1	1
*500	Rotary Valve (includes part 527) (special) (not shown).....	—	1	—	—	—	—	—	—
*500	Rotary Valve (includes parts 527 and (2) 627) (special) (not shown).....	—	—	—	1	—	—	—	—
501	Motor Case (includes parts 303, 308 (2), 402, 421, 889, 891, 892 and 893).....	1	1	—	—	1	1	—	—
501	Motor Case (includes parts 303, 308 (2), 402, 421, 889, 891, 892, 893 and 947).....	—	—	—	—	1	1	—	—
A501	Motor Complete (includes parts 283, 284, 285, 303, 308 (2), 321 (4), 337 (4), 338 (4), 402, 421, 501, 504 (16), 505 (4), 506 (16), 507 (4), 509 (4), 510 (2), 511, 513 (4), 514 (4), 516, 518 (2), 519, 520, 521, 525, 526, 527, 537, 538, 540, 541 (4), 545, 546, 548 (2), 549 (2), 889, 891, 892, 893 and 947).....	1	—	—	—	1	—	—	—
A501	Motor Complete (includes parts 283, 285, 303, 308 (2), 321 (4), 337 (5), 338 (5), 368, 402, 421, 501, 504 (20), 505 (5), 506 (20), 507 (5), 509 (5), 510 (2), 511, 513 (5), 514 (5), 516, 518 (2), 519, 520, 521, 525, 526, 527, 537, 538, 540, 541 (4), 545, 546, 548 (2), 549 (2), 627 (2), 889, 891, 892, 893 and 947).....	—	—	—	—	—	—	—	—

DUPLICATE PART LIST (Continued)

Part No.	Name of Part	E3G	EE3G	E53G	EE53G	E9G	EE9G	E59G	EE59G
*A501	Motor Complete (includes parts 278, 282 (2), 286 (4), 288 (5), 291, 303, 308 (2), 321 (4), 337 (4), 338 (4), 402, 421, 501, 504 (16), 505 (4), 506 (16), 507 (4), 509 (4), 510 (2), 511, 513 (4), 514 (4), 516, 518 (2), 519, 520, 521, 525, 526, 527, 537, 538, 539, 540, 541 (4), 545, 546, 548 (2), 549 (2), 889, 891, 892 and 893) (If specified, the Motor will be furnished with either part 500 or part 503 in place of part 526)	—	1	—	—	—	1	—	—
*A501	Motor Complete (includes parts 278, 282 (2), 286 (4), 288 (5), 291, 303, 308 (2), 321 (4), 337 (5), 338 (5), 368, 402, 421, 501, 504 (20), 505 (5), 506 (20), 507 (5), 509 (5), 510 (2), 511, 513 (5), 514 (5), 516, 518 (2), 519, 520, 521, 525, 526, 527, 537, 538, 540, 541 (4), 545, 546, 548 (2), 549 (2), 627 (2), 889, 891, 892, 893 and 947) (if specified, the Motor will be furnished with either part 500 or part 503 in place of part 526)	—	—	—	1	—	—	—	1
A501R	Motor Complete (same as part A501 except it includes part 526R in place of part 526)	1	—	1	—	1	—	1	—
*503	Rotary Valve (includes part 527) (special) (not shown)	—	1	—	—	—	1	—	—
*503	Rotary Valve (includes parts 527 and (2) 627) (special) (not shown)	—	—	—	1	—	—	—	1
*504	Cylinder Cap Screw Washer	16	16	20	20	16	16	20	20
505	Cylinder	4	4	5	5	4	4	5	5
506	Cylinder Cap Screw (7/26"-14 thread, hex head cap screw, 1" long)	16	16	20	20	16	16	20	20
507	Cylinder Gasket	4	4	5	5	4	4	5	5
509	Connecting Rod	4	4	5	5	4	4	5	5
510	Connecting Rod Ring	2	2	2	2	2	2	2	2
511	Connecting Rod Bushing	1	1	1	1	1	1	1	1
513	Piston (includes parts 337 and 338)	4	4	5	5	4	4	5	5
514	Piston Wrist Pin (includes caps)	4	4	5	5	4	4	5	5
516	Crank Bare (includes parts 519, 520, 521, 537, 540 and (4) 541)	1	1	1	1	1	1	1	1
A516	Crank Complete (includes parts 509 (4), 510 (2), 511, 516, 518 (2), 519, 520, 521, 537, 540 and (4) 541)	1	1	—	—	1	1	—	—
A516	Crank Complete (includes parts 509 (5), 510 (2), 511, 516, 518 (2), 519, 520, 521, 537, 540 and their equivalent)	1	1	1	1	1	1	1	1
518	Crank Bearing (Fafair 207K, M.R.C. 207S, S.K.F. 6207, New Departure 3207, Federal 1207 or their equivalent)	—	—	1	1	—	—	1	1
519	Crank Pin Sleeve	2	2	2	2	2	2	2	2
520	Crank Taper Pin	1	1	1	1	1	1	1	1
521	Crank Pinch Bolt (1/2"-20 thread, hex head bolt, 1 1/2" long)	1	1	1	1	1	1	1	1
525	Rotary Valve Bushing	—	—	1	1	—	—	1	1
525	Rotary Valve Bushing (includes part 539)	1	1	—	—	1	1	—	—
526	Rotary Valve (includes part 527) (standard)	1	1	—	—	1	1	—	—
526	Rotary Valve (includes parts 527 and (2) 627) (standard)	—	—	1	1	—	—	1	1
†526R	Rotary Valve (includes parts 527) (special) (not shown)	1	—	—	—	1	—	—	—
†526R	Rotary Valve (includes parts 527 and (2) 627) (special) (not shown)	—	—	—	—	—	—	—	—
527	Valve Drive Pin	1	1	—	—	1	1	—	—
527	Valve Drive Pin, Large	—	—	1	1	—	—	1	1
537	Crank Pinch Bolt Lock Washer (not shown)	1	1	1	1	1	1	1	1
538	Bushing Key	1	1	1	1	1	1	1	1
539	Valve Oiler	1	1	1	1	1	1	1	1
540	Oil Splasher (includes (4) part 541)	1	1	1	1	1	1	1	1
541	Oil Splasher Rivet	4	4	4	4	4	4	4	4

DUPLICATE PART LIST (Continued)

Part No.	Name of Part	E3G	EE3G	E53G	EE53G	E9G	EE9G	E59G	EE59G
545	Valve Chest (includes parts 525 and 538)	1	1	1	1	1	1	1	1
545	Valve Chest (includes parts 525, 538 and 539)	1	1	1	1	1	1	1	1
A545	Valve Chest Complete (includes parts 283, 284, 285, 321 (4), 525, 526, 527, 538, 539, 545, 546, 548 (2) and (2) 549)	1	1	1	1	1	1	1	1
A545	Valve Chest Complete (includes parts 283, 285, 321 (4), 525, 526, 527, 538, 545, 546, 548 (2), 549 (2) and (2) 627)	1	1	1	1	1	1	1	1
A545	Valve Chest Complete (includes parts 278, 282 (2), 286 (4), 288 (5), 291, 321 (4), 525, 526, 527, 538, 539, 545, 546, 548 (2) and (2) 549) (If specified, either part 500 or part 503 will be furnished in place of part 526)	1	1	1	1	1	1	1	1
A545	Valve Chest Complete (includes parts 278, 282 (2), 286 (4), 288 (5), 291, 321 (4), 525, 526, 527, 538, 545, 546, 548 (2), 549 (2) and (2) 627) (If specified, either part 500 or part 503 will be furnished in place of part 526)	1	1	1	1	1	1	1	1
A545R	Valve Chest Complete (includes the same parts as A545 except it includes part 526R instead of part 526)	1	1	1	1	1	1	1	1
546	Valve Chest Cover	1	1	1	1	1	1	1	1
548	Valve Chest Cover Screw, Long	2	2	2	2	2	2	2	2
549	Valve Chest Cover Screw, Short ($\frac{3}{8}$ " .16 thread, hex head cap screw, $\frac{7}{8}$ " long)	2	2	2	2	2	2	2	2
592	Motor Case Cover Gasket	2	2	2	2	2	2	2	2
627	Valve Drive Pin, Small (not shown)	1	1	1	1	1	1	1	1
674	Exhaust Muffler (includes part 675) (special) (not shown)	1	1	1	1	1	1	1	1
675	Muffler Nipple (special) (not shown)	1	1	1	1	1	1	1	1
750	Gear Box (includes parts 27, 351 (2) and 766) (not available for motors under serial 22,500)	1	1	1	1	1	1	1	1
751	Motor Case Cover (not available for motors under serial 22,500)	1	1	1	1	1	1	1	1
752	Motor Pinion	1	1	1	1	1	1	1	1
753	Motor Pinion Spacer	1	1	1	1	1	1	1	1
754	Motor Pinion Bearing (Fafnir 5205N, Federal 5205N or their equivalent)	1	1	1	1	1	1	1	1
755	Motor Pinion Packing	1	1	1	1	1	1	1	1
756	Drive Gear	1	1	1	1	1	1	1	1
757	Drive Shaft	1	1	1	1	1	1	1	1
758	Drive Gear Key	1	1	1	1	1	1	1	1
759	Drive Shaft Packing	1	1	1	1	1	1	1	1
760	Drive Shaft Packing Washer (used under serial 22,500) (not shown)	1	1	1	1	1	1	1	1
761	Drive Shaft Bearing Spacer (not shown)	1	1	1	1	1	1	1	1
762	Drive Shaft Inner Bearing (Fafnir 5205N, Federal 5205N or their equivalent) (used under serial 22,500)	1	1	1	1	1	1	1	1
762	Drive Shaft Inner Bearing (Fafnir 306W, M.R.C. 306M, New Departure 1306, Federal 1306 or their equivalent) (used over serial 22,500)	1	1	1	1	1	1	1	1
763	Drive Shaft Outer Bearing (Fafnir 308WDD, M.R.C. 308MFF, New Departure 77308, Federal 1308MFF or their equivalent)	1	1	1	1	1	1	1	1
763	Drive Shaft Outer Bearing (Fafnir 5206N, Federal 5206N or their equivalent) (used under serial 22,500)	1	1	1	1	1	1	1	1
763	Drive Shaft Outer Bearing (Fafnir 307WD, M.R.C. 307MF, New Departure 7307MF, Federal 1307MF or their equivalent) (used over serial 22,500)	1	1	1	1	1	1	1	1
766	Motor Case Cover Dowel (not shown)	1	1	1	1	1	1	1	1
768	Drive Shaft Key	1	1	1	1	1	1	1	1

DUPLICATE PART LIST (Continued)

Part No.	Name of Part	E3G	EE3G	E53G	EE53G	E9G	EE9G	E59G	EE59G
769	Bearing Screw (used over serial 22,500)	1	1	1	1	2	2	2	2
770	Oil Washer	1	1	1	1	1	1	1	1
772	Drive Shaft Nut	1	1	1	1	1	1	1	1
780	Packing Washer (used over serial 22,500)	1	1	1	1	1	1	1	1
889	Vent Cap Screen (used over serial 25,000) (not shown)	1	1	1	1	1	1	1	1
891	Vent Cap Chain (used over serial 25,000) (not shown)	1	1	1	1	1	1	1	1
892	Vent Cap Screen Retainer (used over serial 25,000) (not shown)	1	1	1	1	1	1	1	1
893	Vent Cap Cotter (used over serial 25,000) (not shown)	1	1	1	1	1	1	1	1
947	1/4" Pipe Plug (not shown)	—	—	1	1	—	—	—	—

†When equipped with a standard Rotary Valve (part 526) the Drive Shaft on Sizes E3G and E53G Non-Reversible Motors rotates in a clockwise direction when facing the Shaft; the Shaft on the Sizes E9G and E59G Non-Reversible Motors rotates in a counterclockwise direction. The use of the special Rotary Valve (part 526R) reverses the direction of rotation.

*Reversible Motors equipped with the standard Rotary Valve (part 526) have the same speed and power in either direction of rotation. When equipped with the special Rotary Valve (part 500), Sizes EE3G and EE53G develop greater speed and power in the clockwise direction of rotation, as viewed when facing the Drive Shaft. Sizes EE9G and EE59G develop greater speed and power in the counterclockwise direction. When equipped with the special Rotary Valve (part 503), speed and power characteristics relative to the direction of rotation are directly opposite those for the No. 500 Rotary Valve.

UNIT ASSEMBLIES

Part No.	Name of Part
U501	<p>Motor Assembly For Sizes E3G and E9G (includes parts 283, 284, 285, 303, 308 (2), 321 (4), 337 (4), 338 (4), 402, 421, 501, 504 (16), 505 (4), 506 (16), 507 (4), 509 (4), 510 (2), 511, 513 (4), 514 (4), 516, 518 (2), 519, 520, 521, 525, 526, 527, 537, 538, 539, 540, 541 (4), 545, 546, 548 (2), 549 (2), 889, 891, 892 and 893) For Sizes E53G and E59G (includes parts 283, 285, 303, 308 (2), 321 (4), 337 (5), 338 (5), 368, 402, 421, 501, 504 (20), 505 (5), 506 (20), 507 (5), 509 (5), 510 (2), 511, 513 (5), 514 (5), 516, 518 (2), 519, 520, 521, 525, 526, 527, 537, 538, 540, 541 (4), 545, 546, 548 (2), 549 (2), 627 (2), 889, 891, 892, 893 and 947) For Sizes EE3G and EE9G (includes parts 278, 282 (2), 286 (4), 288 (5), 291, 303, 308 (2), 321 (4), 337 (4), 338 (4), 402, 421, 501, 504 (16), 505 (4), 506 (16), 507 (4), 509 (4), 510 (2), 511, 513 (4), 514 (4), 516, 518 (2), 519, 520, 521, 525, 526, 527, 537, 538, 539, 540, 541 (4), 545, 546, 548 (2), 549 (2), 889, 891, 892 and 893) (If specified, either part 500 or part 503 will be furnished in place of part 526). For Sizes EE53G and EE59G (includes parts 278, 282 (2), 286 (4), 288 (5), 291, 303, 308 (2), 321 (4), 337 (5), 338 (5), 368, 402, 421, 501, 504 (20), 505 (5), 506 (20), 507 (5), 509 (5), 510 (2), 511, 513 (5), 514 (5), 516, 518 (2), 519, 520, 521, 525, 526, 527, 537, 538, 540, 541 (4), 545, 546, 548 (2), 549 (2), 627 (2), 889, 891, 892, 893 and 947) (If specified, either part 500 or part 503 will be furnished in place of part 526)</p> <p>Motor Assembly—For Sizes E3G, E53G, E9G and E59G (same as U501, except part 526R is included in place of part 526) Gear Box Assembly For Sizes E3G, E53G, EE3G and EE53G (includes parts 27, 312 (8), 321 (8), 330, 351 (2), 592 (2), 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 761, 762, 763, 766, 768, 769, 770, 772 and 780) For Sizes E9G, E59G, EE9G and EE59G (includes parts 27, 35, 52, 312 (8), 321 (8), 330, 351 (2), 364, 365, 366, 367, 369, 592 (2), 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 762, 763, 766, 768, 769 (2), 770, 772 and 780)</p>
U501R	
U750	

MAINTENANCE TOOLS

Tool No.	Name of Tool	Operation
932 933	Valve Chest Jack Bolts..... Piston Ring Compressor.....	Removing the No. 545 Valve Chest from the No. 501 Motor Case. Compressing the No. 338 Piston Ring in the groove in the No. 513 Piston when installing the No. 505 Cylinder on the Motor Case.

Ingersoll-Rand

11 Broadway, New York 4, N. Y., U. S. A.



Atlanta 5, Ga.
800 Peachtree St., N. E.
Birmingham 3, Ala.
1700 Third Ave., South
Boston 16, Mass.
285 Columbus Ave.
Buffalo 2, N. Y.
117 W. Chippewa Street
Butte, Mont.
845 S. Montana St.
Chicago 6, Ill.
400 W. Madison St.
Cincinnati 2, Ohio
224 East 9th Street
Cleveland 3, Ohio
4506 Chester Ave.
Dallas 4, Texas
1728 Canton Street
Denver 2, Colo.
1641 Blake Street
Detroit 26, Mich.
Congress at First

Duluth 2, Minn.
Providence Bldg.
El Paso, Texas
2100 Wyoming St.
Honolulu, T. H.
Hawaiian Equipment Co., Ltd.
P. O. Address, Box 2990
Houston 3, Texas
2109 McKinney Ave.
Kansas City 6, Mo.
1012 Baltimore Ave.
Knoxville 24, Tenn.
412 W. Jackson Ave.

Los Angeles 33, Calif.
1460 E. Fourth Street
Minneapolis 14, Minn.
2514 University Avenue, S. E.
Newark 5, N. J.
899 Frelinghuysen Ave.
New Orleans 15, La.
960 South Genois Street
New York 4, N. Y.
11 Broadway
Philadelphia 3, Pa.
2037 Chestnut St.
Picher, Okla.
226 West A Street

Pittsburgh 22, Pa.
932 Penn Ave.
Pottsville 3, Pa.
312 N. Second St.
Richmond 21, Va.
3431 West Leigh St.
Salt Lake City 1, Utah
144 S. W. Temple Street
San Francisco 7, Calif.
350 Brannan Street
Scranton 3, Pa.
315 Walnut St.
Seattle 4, Wash.
526 First Ave., South
St. Louis 3, Mo.
2327 Locust Blvd.
Tulsa 3, Okla.
319 East 5th Street
Washington 6, D. C.
Government office
Heurich Bldg., 1627 K. St., N. W.
Wilmington 1, Del.
5 East 9th Street

CANADA

Canadian Ingersoll-Rand Co., Limited

Montreal, Que.
New Birks Bldg., Phillips Square
Calgary, Alberta
611-11th Ave. West
Kirkland Lake, Ontario
29 Government Road, East

Nelson, British Columbia
371 Baker St.
Sherbrooke, Quebec
P. O. Box 691
Sydney, Nova Scotia
60 Prince Street
Timmins, Ontario
394 Algonquin Blvd., East

Toronto, Ontario
1057 Bay St.
Vancouver, British Columbia
950 Richards Street
Winnipeg, Manitoba
175 McDermot Ave., East

SOUTH AMERICA

Argentina, Buenos Aires
General Electric, S. A.
Calle Tucuman 117, (R34)
Bolivia, La Paz
International Machinery Co. (Bolivia), S. A.
Casilla 815
Bolivia, Oruro
International Machinery Co. (Bolivia) S. A.
Casilla 254
Brazil, Rio de Janeiro
Ingersoll-Rand (Máquinas) S. A.
Avenida Rio Branco 99-101 10º Andar
Brazil, Sao Paulo
Ingersoll-Rand (Máquinas) S. A.
Rua 7 de Abril, No. 34
British Guiana, Georgetown
Tractor and Motor Co.
Lot 4, Lombard St.
British Honduras, Belize
Belize Supply Co.
Chile, Antofagasta
International Machinery Co.
Casilla A
Chile, Iquique
Grace y Cia. (Chile) S. A.
Casilla 5-D
Chile, Santiago
International Machinery Co.
Casilla 107-D
Colombia, Barranquilla
International General Electric, S. A.
Apartado Nacional 919
Colombia, Bogota
International General Electric, S. A.
Apartado Nacional 2552
Colombia, Cali
International General Electric, S. A.
Apartado Nacional 323
Colombia, Medellin
International General Electric, S. A.
Apartado Nacional 11
Peru, Lima
Ingersoll-Rand Co. of Peru
Casilla 2261
Uruguay, Montevideo
General Electric, S. A.
Casilla de Correo 764
Venezuela, Caracas
International General Electric, S. A.
Apartado Postal No. 1666
Venezuela, Maracaibo
International General Electric, S. A.
Apartado 392

EUROPE

Belgium, Brussels
Cie. Beige Ingersoll-Rand
62 Chaussée de Mons
England, London, E. C. 4
Ingersoll-Rand Co. Ltd.
165 Queen Victoria St.
Scotland, Glasgow
Ingersoll-Rand Co., Ltd.
20 Renfrew Street
Denmark, Copenhagen
Hoff & Company
Finland, Helsinki
Oy Gronblom Ab., P. O. Box 370
France, Paris 8e
Compagnie Ingersoll-Rand
54 Rue de Londres
Greece, Athens
Auto-Tractor-Tire Co., Inc.
32 Patissia St.
Italy, Milano
Motomeccanica, S. p. A.
Via Oglio 18

EUROPE (Continued)

Norway, Oslo
Maskin s/s K. Lund & Co.
Revierstredet 3
Portugal, Lisbon
Ingersoll-Rand Lda.
Largo do Corpo Santo, 28-2º
Spain, Madrid
Cia. Ingersoll-Rand S. A.
Calle Montalbano 5
Sweden, Stockholm-Bromma
AB Amerikanska Tryckluftsmaskiner,
Ulvsundavagen 168
Switzerland, Zurich 1
Robert Aebi & Cie, S. A.
Turkey, Istanbul
Adil Gabay & Albert Koenka
Galata Posta Kutusu 1258

AUSTRALASIA

Australia, South Melbourne
Ingersoll-Rand (Australia) Pty. Ltd.
40 Moray Street, S. C. 5 Victoria
New South Wales, Sydney
Ingersoll-Rand (Australia) Pty., Ltd.
Corner Clarence and Barrack Sts.
West Australia, Perth
Ingersoll-Rand (Australia) Pty., Ltd.
996 Hay Street
West Australia, Kalgoorlie
Ingersoll-Rand (Australia) Pty., Ltd.
P. O. Box 152
Queensland, Brisbane
Ingersoll-Rand (Australia) Pty., Ltd.
100 Mary Street
South Australia, Adelaide
Ingersoll-Rand (Australia) Pty., Ltd.
57 Flinders Street
New Zealand, Wellington
Ingersoll-Rand (Australia) Pty., Ltd.
Richardson, McCabe and Co.
13 Grey Street
New Zealand, Auckland
John Chambers & Son, Ltd.
Fort Street

CENTRAL AMERICA and the WEST INDIES

Bahamas, Nassau
Bahamian Industries, Ltd.
British West Indies, Trinidad
Port-of-Spain
Neal & Massy Engineering Co. Ltd.
61-63 Edward St.
Costa Rica, San Jose
H. T. Purdy, Inc.
Apartado 750
Cuba, Havana
Ingersoll-Rand de Cuba, S. A.
Calle Aguacate No. 158
Guatemala, Guatemala City
Grace & Co., C. A.
Jamaica, Kingston
Canadian Agencies, Ltd.
P. O. Box 31
Netherlands West Indies, Curacao & Aruba
S. E. L. Maduro & Son, Inc.
Nicaragua, Managua
Grace & Co., C. A.
Puerto Rico, San Juan 14
Ulpiano Casal, Inc., P. O. Box 3087
Republic of Panama, Panama
Pan-Americanas, S.A.
Apartado, 557
Salvador, San Salvador
Grace & Co., C. A.

MEXICO

Mexico, D. F.
Ingersoll-Rand de Mexico, S. A.
Ramon Alcazar 20

ASIA and The EAST

Hong Kong
Jardine Engineering Co., Ltd.
India, Bombay
Ingersoll-Rand (India) Ltd.
Devkaran Nanjee Bldg.
17-B Elphinstone Circle Fort
Calcutta, India
Ingersoll-Rand (India) Ltd.
7 Wellesley Place
P. O. Box 2307
Iran
Israel, Tel-Aviv
Engineering & Mfg. Co. Ltd.
Japan, Tokyo
American Trading Co., Inc.
S. K. F. Bldg., 7 Gochi
1 Shiba Park, Minatu-ku
Java, Sourabaya & Batavia
N. V. Rubak & Co.
Pakistan, Karachi
Consolidated Commercial Co.
P. O. Box 744, Garden Road
Philippine Islands
Koppel, Inc.
Boston & 23rd Sts., Port Area.
Singapore
The Borneo Co. Limited
Post Box 898
Taiwan, Taipei
Jardine Engineering Co., Ltd.
P. O. Box 81

AFRICA

Union of South Africa
Transvaal, Johannesburg
Ingersoll-Rand Co. (So. Africa) Ltd.
Irandi House, P. O. Box 1809
Heidelberg Road, Village Main
Cape Province, Capetown
Ingersoll-Rand Co. (So. Africa) Ltd.
Seniam Bldg., P. O. Box 945
Cape Province, Port Elizabeth
Ingersoll-Rand Co. (So. Africa) Ltd.
P. O. Box 1028
Natal, Durban
A. & H. MacNay (Pty.) Ltd.
National Mutual Bldg., P. O. Box 811
Kenya Colony, Kisumu
(Kenya, Uganda and Tanganyika)
P. O. Box 146
Northern Rhodesia, N'Dola
P. O. Box 74
Southern Rhodesia, Bulawayo
114 Main St., P. O. Box 999
Portuguese East Africa, Lourenco Marques
Santos Marques and Silva Limitado
P. O. Box 166
Mauritius, Port Louis
Blyth Brothers and Co.
Egypt, Alexandria and Cairo
The Tractor & Engineering Co., S. A. E.
West Africa, Takoradi, Gold Coast Colony, Northern Territories of Gold Coast, British Sphere of Togoland
United Africa Company
Algeria, Algiers
Cie. Ingersoll-Rand
16, Rue Auber
Soregal, Dakar
Compagnie française de
L'Afrique Occidentale
French Morocco, Casablanca
E. Peggary, 287, Blvd. de la Gare Carthage

REPAIR PARTS LIST

O. F. JORDAN CO.

EAST CHICAGO, INDIANA -- U. S. A.

PAGE NO. 2-151-501

Date June 25, 1928

Model 3-175, 3-200, 3-210
3-211, 3-215, 3-216

PART NO.	NO. PER CAR	DESCRIPTION
<u>TRUCK ASSEMBLY 50 TON - TYPE "A"</u>		
30753	2	Wheel & Axle Assy. 2 Wheels 33" diameter 750# A.A.S. Chilled Tread Freight Type Mounted on 1 Axle, A.A.S. 5-1/2" x 10" Journals
30570	2	Side Frames, Integral Box, 9'-6" Wheel Base, Cast Steel, A.A.S. Conditions, 50 T. Capacity
30021	1	Bolster - Cast Steel, 50 Ton Capacity with Dead Lever Bracket
30260	4	Dust Guards for 5-1/2" x 10" Journals
30596	4	Journal Bearings - A.A.S. Std. 5-1/2" x 10"
30623	4	Journal Bearing Wedges - A.A.S. Std. 5-1/2" x 10"
2-151-1	1	Spring Plank Channel (13" x 31.3/4" x 7'-6")
30705	8	Springs #D-2 (Inner & Outer sets)
30735	4	Spring Plates U.S. -4
30041	2	Brake Beams A.A.S. No. 15 (1RH & 1LH)
3-176-2	1	Brake Beams Safety Angle 3" x 3" x 1/4" x 3'-0"
11182	2	P.M. Rivets 3/4" x 2-1/4" for 3-176-2
30085	4	Brake Hanger Wear Plates - Type 4-1
11375	4	Brake Hanger Wear Plate Retainers (Spring Cotter Pins)
30061	4	Brake Hangers 11-5/8" Loop, Type "B"
30150	4	Brake Shoes A.A.S. 1A
30170	4	Brake Shoe Keys
30230	2	Bottom Rod Guards
30202	1	Truck Lever Conn. Rod, 3 Hole, Type "Y", 3'-4"
3125-501	6	Brake Lever Pins 1-3/32" x 3-1/2"
11355	6	Spring Cotter Pins 3/8" x 2-1/2"
30630	1	Dead Lever Guide
30610	4	Journal Box Lids Complete with pins 5-1/2" x 10"
2-151-4	1	Truck Center Pin (2" dia. x 15" lg.)
3013-506	2	Truck Brake Levers 7-1/2" x 13-3/4"
30627	4	Waste Retainer Spring for 5 1/2" x 10" Journals; Part No. 10

REPAIR PARTS LIST

O. F. JORDAN CO.
EAST CHICAGO, INDIANA — U. S. A.

PAGE NO. 3-176-500

Date June 25, 1928

Model 3-175, 3-200, 3-210,
3-211, 3-215, 3-216

PART NO.	NO. PER CAR	DESCRIPTION
<u>TRUCK ASSEMBLY 70 TON CAPACITY TYPE "A" CAR</u>		
30772	2	Wheel & Axle Assy. 2 Wheels 33" dia. - 850# AAR Std. Chilled Tread Freight Type mounted on 1 - Axle AAR 6" x 11" Journals
30580	2	Side Frames, Integral Box 5'-0" Wheel Base, Cast Steel 70 Ton Capacity
30028	1	Bolster - Cast Steel 70 Ton Capacity with Dead Lever Bracket
3-176-1	1	Spring Plank Channel 13" @ 31.8# x 7'-10"
30042	2	Brake Beams #3 for 5'-0" Wheel Base Truck, 1A, 1L
30261	4	Dust Guards for 6" x 11" Journals
30600	4	Journal Bearings A.A.R. Std. 6" x 11"
30625	4	Journal Bearing Wedges A.A.R. Std. 6" x 11"
30715		Spring Nest Complete #H-2
30745	2	with UC-5 Plates
3-176-2	1	Brake Beam Safety Angle, 3" x 3" x $\frac{1}{4}$ " x 3'-0"
11182	2	B.H. Rivets $\frac{3}{4}$ " x 2- $\frac{1}{4}$ " for 3-176-2
30086	4	Brake Hanger Wear Plates Type K-2
11365	8	Brake Hanger Wear Plate Retainers Spring Cotter Pin $\frac{1}{2}$ " x 4- $\frac{1}{2}$ "
30060	4	Brake Hanger 9- $\frac{1}{2}$ " Loop Type "B"
30150	4	Brake Shoes A.A.R. 1A
30170	4	Brake Shoe Keys
30230	2	Bottom Rod Guards
30201	1	Truck Lever Connection Rod 3 Hole Type "Y" 2'-10"
3013-506	2	Truck Brake Lever 7 $\frac{1}{2}$ " x 18- $\frac{3}{4}$ "
3125-501	6	Brake Lever Pins 1- $\frac{3}{32}$ " dia. x 3- $\frac{1}{2}$ "
11355	6	Spring Cotter Pins $\frac{3}{8}$ " x 2- $\frac{1}{2}$ "
30630	1	Dead Lever Guide
30615	4	Journal Box Lids Complete with Pins 6" x 11"
3-176-3	2	Truck Side Bearing Plates
2-151-4	1	Truck Center Pin 2" dia. x 15" lg.
30628	4	Waste Retainer Spring for 6" x 11" Journals; Part No. 11

REPAIR PARTS LIST

O. F. JORDAN CO.
EAST CHICAGO, INDIANA — U. S. A.

PAGE NO.

2-175-502
3-177-500
3-184-500

Date 6-25-28; 9-28-37

Model 3-175, 3-200, 3-210,
3-211, 3-215, 3-216

PART NO.	NO PER CAR	DESCRIPTION
<u>OPERATOR'S CAB ASSEMBLY</u>		
3-184-500	1	Operators Cab Assembly
3513-1	1	Rear Door (Single Glazed)
3513-2	1	Front Door (Double Glazed)
11407	1	Outside Rear Door Hasp (Stanley #941)
31120	2	Door Pulls
	1	Door Bolt
3517	4	Window Sash 2 RH, 2 LH
	4	Window Sash Handle
11429	2	Window Sash Fasteners
11430	2	Hook & Eyes for securing doors
25196	2	Weather Strip Set for doors
25197	8	Weather Strip for windows
3115	1	Smoke Jack
<u>COUPLER & DRAFT GEAR ARRANGEMENT</u>		
2-175-502		
30450	2	Coupler
30500	2	Draft Gear
30790	2	Draft Gear Yoke
2-175-1	2	Follower Plate
2-175-2	2	Draft Gear Key
2-175-3	2	Draft Gear Key Retainer
11355	2	Cotter Pin 3/8" x 2-1/2"
2-175-4	2	Draft Gear Carrier Iron Plate
10406	12	Bolt 3/4" x 2-1/2" for 2-175-4
11032	12	Lock Washer 3/4" for 10406
2-175-7	2	Coupler Wearing Plate (Channel 5" @ 9.0# x 11"lg.)
<u>UNDERFRAME ASSEMBLY DITCHER - LONG TEMPLATE WING</u>		
3-177-500		
2000	2	Striking Castings
11260	20	B.H. Rivets 7/8" x 2-1/2" for 2000
11262	36	B.H. Rivets 7/8" x 2-3/4" for 2000
2227	1	Rear Draft Lug, L.H.
2228	1	Rear Draft Lug, R.H.
11268	10	B.H. Rivets 7/8" x 2-1/4"
11262	18	B.H. Rivets 7/8" x 2-3/4"
2002-500	2	Body Bolster Center Plate Casting
3060	4	Wing Brace Connection Assembly
3267-500	1	Wing Rest Assembly
3269	1	Rear Brace Rest H-Beam Assembly
3355	2	Brace Connection Assembly on Body at Rear End of Car

FIRST USED ON CAR SERIAL NOS. 700 (S.S. 3-177) June 25, 1920
 First Used on Car Serial No. 757 for 3-184, Sept. 28, 1937

REPAIR PARTS LIST

O. F. JORDAN CO.
EAST CHICAGO, INDIANA — U. S. A.

PAGE NO. 3-175-PK 1 of 3
Date June 25, 1928
Model 3-175

PART NO.	NO. PER CAR	DESCRIPTION
<u>AIR LINES AND EQUIPMENT FOR TYPE "A" DITCHERS</u>		
3165	6	PIPE KIT - CAR END TO 6" LOCK CYLINDER ON MAIN WING HORIZONTAL BRACE
3313-500	6	3/4" Air Hose Assembly
31340	6	3/8" Stop Cock
3235	1	MAIN RESERVOIR LINE TO WHISTLE & GAUGE PIPE KIT
31540	1	3/8" Stop Cock
31650	1	Whistle (1 1/2" Plain Bell)
31025	1	3 1/2" Air Gauge (0-200#)
3292-A-500	1	PIPE KIT - MAIN AIR RESERVOIR TO MANIFOLD
31536	1	Safety Valve 3/4" Male End
3293	1	PIPE KIT - TRAIN LINE TO MAIN AIR RESERVOIR AND AUXILIARY SUPPLY LINE
3360	1	U-Bolt
3-133-5	1	Angle Cock Bracket
10379	2	Bolt 5/8" dia. x 2-1/2" for 3-133-5
11030	2	Lock Washer 5/8" for 10379
31635	1	1-1/4" Vertical Check Valve
31632	1	1-1/4" Gas Lock Cock
31633	1	1-1/4" Stop Cock (Westinghouse)
3294	1	PIPE KIT - MAIN RESERVOIR DRAIN AND BILLED LINE
31582	1	3/4" Stop Cock
378	1	Handle
3295-500	1	PIPE KIT - MANIFOLD TO 23" STATIONARY POST CYL. RH
10275	1	1" Pipe Plug
3296-500	1	PIPE KIT - MANIFOLD TO 23" STATIONARY POST CYL. LH
10275	1	1" Pipe Plug
3297-500	1	PIPE KIT - MANIFOLD TO 23" FRONT PLOW CYLINDER
10275	1	1" Pipe Plug
3298	2	PIPE KIT - MANIFOLD TO CAR END FOR BANK SLOPER CYLINDER
3299-500	2	PIPE KIT - MANIFOLD TO CAR END FOR 4 1/2" BANK SLOPER LOCK CYLINDER
3300-501	2	PIPE KIT - MANIFOLD TO CAR END FOR 19" CYLINDER ON MAIN WING DIAGONAL BRACE

REPAIR PARTS LIST

O. F. JORDAN CO.
EAST CHICAGO, INDIANA — U. S. A.

PAGE NO. 3-175-PK 2 of 3
Date June 25, 1928
Model 3-175

PART NO.	NO. PER CAR	DESCRIPTION
3301-500	2	PIPE KIT - MANIFOLD TO CAR END FOR 6" LOCK CYLINDER ON MAIN WING DIAGONAL BRACE
3302-501	2	PIPE KIT - MANIFOLD TO CAR END FOR 6" LOCK CYLINDER ON MAIN WING HORIZONTAL BRACE
3303-501	2	PIPE KIT - MANIFOLD TO AIR MOTOR
3317-506		1" Air Hose Assembly
3304-501	2	PIPE KIT - MANIFOLD TO 15" WING OPENING & CLOSING CYLINDER
3317-502	2	1" Air Hose Assembly
3305-501	1	PIPE KIT - MANIFOLD TO 4 $\frac{1}{2}$ " LOCK CYLINDER ON FRONT FLOW
3306-500	1	PIPE KIT - TRAIN LINE TO EMERGENCY BRAKE VALVE
31604	1	1" Stop Cock
377	1	Handle
3307	2	PIPE KIT - MANIFOLD TO CAR END FOR 5" CARRIER WING BRACE CYLINDER
3308	2	PIPE KIT - MANIFOLD TO CAR END FOR 3 $\frac{1}{2}$ " LOCK CYLINDER ON CARRIER WING BRACE
3309	2	PIPE KIT - CAR END TO BANK SLOPER CYLINDER
3317-504	4	1" Air Hose Assembly
3310	2	PIPE KIT - CAR END TO 4 $\frac{1}{2}$ " BANK SLOPER LOCK CYL.
3319-502	2	5/8" Air Hose Assembly
3311	2	PIPE KIT - CAR END TO 19" MAIN WING DIAGONAL BRACE CYLINDER
3317-504	2	1" Air Hose Assembly
3317-507	2	1" Air Hose Assembly
3312	2	PIPE KIT - CAR END TO 6" LOCK CYLINDER ON MAIN WING DIAGONAL BRACE
3319-502	2	5/8" Air Hose Assembly
3319-503	2	5/8" Air Hose Assembly
3315	2	PIPE KIT - CAR END TO 5" CARRIER WING BRACE CYL.
3313-501	4	3/4" Air Hose Assembly
3316	2	PIPE KIT - CAR END TO 3 $\frac{1}{2}$ " LOCK CYLINDER ON

REPAIR PARTS LIST

O. F. JORDAN CO.
EAST CHICAGO, INDIANA — U. S. A.

PAGE NO. 3-175-PK 3 of 3

Date June 25, 1928

Model 3-175

PART NO.	NO. PER CAR	DESCRIPTION
3319-500	2	CARRIER WING BRACE 5/8" Air Hose Assembly
3165	6	PIPE KIT - CAR END TO 6" LOCK CYLINDER ON MAIN WING
3318-500	6	3/4" Air Hose Assembly
31540	6	3/8" Stop Cock
3083-A	1	AIR RESERVOIR

USED ON CAR SERIAL NOS. 700

REPAIR PARTS LIST

O. F. JORDAN CO.
EAST CHICAGO, INDIANA — U. S. A.

PAGE NO. 3-183-503 1 of 2

Date April 26, 1948

Model 3-175, 3-210, 3-200,
3-216, 3-215, 3-211

PART NO.	NO. PER CAR	DESCRIPTION
BRAKE ARRANGEMENT FOR TYPE "A" CAR WITH VERTICAL HAND BRAKE WHEEL		
30351	1	"AB" Valve Wabco #501841
10389	4	Bolt 5/8" dia. x 12" for 30351
30352	1	Brake Reservoir Wabco #96789
10532	3	Bolt 1" dia. x 8" for 30352
30355	1	1 1/4" Branch Pipe Tee Top Outlet Wabco #95496
30356	2	1 1/4" Angle Cock Wabco #501382
30350	1	10" Brake Cylinder Wabco #94973
10380	6	Bolt 5/8" dia. x 3" for 30350
30357	1	Dirt Collector and Cutout Cock #94782
25017	2	1-1/4" Train Line Hose #87101
30358	1	3/8" Retainer Valve Wabco #96733
10353	2	Bolt 3/8" dia. x 1-1/2" for 30358
10970	2	Lock Washer 3/8" for 10353
3-183-1	1	"AB" Valve Support Channel
3-183-2	1	"AB" Valve Support Channel
10385	4	Bolt 5/8" dia. x 4" for 3-183-1 and 3-183-2
3076	1	Branch Pipe Tee Support Assembly
3-183-5	1	Angle Cock Bracket Rear
10379	2	Bolt 5/8" dia. x 2-1/2" for 3-183-5
11030	2	Lock Washer 5/8" for 10379
3330	1	Angle Cock Bracket Assembly at Flow End
3360	2	U-Bolt for Angle Cook
3284	1	Pipe Kit - Train Line
3320-500	1	1 1/2" Air Hose Assembly
31633	1	1 1/2" X-Heavy Stop Cook
3285	1	Pipe Kit - Train Line to "AB" Valve
3286-501	1	Pipe Kit - "AB" Valve to Retaining Valve (at rear end of car)
3287	1	Pipe Kit "AB" Valve to Brake Reservoir Emergency Side
3288	1	Pipe Kit "AB" Valve to Brake Reservoir Auxiliary Side
3289	1	Pipe Kit "AB" Valve to Brake Cylinder
3336	1	Release Valve Rod
3168-500	1	Brake Rod Assembly, 7'-8" lg. (Floating Lever to Front Truck Lever)
3168-501	1	Brake Rod Assembly, 15'-5" lg. (Cylinder Lever to Floating Lever)
3168-502	1	Brake Rod Assembly, 11'-5" lg. (Cylinder Lever to Rear Truck Lever)
3013-504	1	Brake Floating Lever, 6" x 24"
3013-503	1	Brake Cylinder Lever, 16" x 20"
3125-501	8	Brake Lever Pin, 1-3/32" dia. x 3-1/2"

REPAIR PARTS LIST

O. F. JORDAN CO.

EAST CHICAGO, INDIANA — U. S. A.

PAGE NO. 3-183-503 2 of 2

Date April 26, 1948

Model 3-175, 3-210, 3-200,
3-216, 3-215, 3-211

PART NO.	NO. PER CAR	DESCRIPTION
3125-500	1	Push Rod Pin, 5-1/8" lg.
11355	10	Cotter Pin 3/8" x 2 1/8" for 3125, 3013 & 3168
3341	1	Floating Lever Fulcrum Assembly
10416	2	Bolt 3/4" x 3" for 3341
11032	2	Lock Washer 3/4" for 10416
3037	1	Push Rod, 2' 2-1/4"
3172-502	1	Hand Brake Rod Assembly - Horizontal
30298	1	Miner Power Handbrake Assembly #D-3290-XL
10372	4	Bolt 5/8" x 1 1/8" for 30298
11030	4	Lock Washer 5/8" for 10372
3046	1	Bell Crank Holder Assembly for Hand Brake
3125-502	1	Pin 1-3/32" x 6" for 3046
3050-500	1	Hand Brake Rod Assy. Vertical 3/4" x 5' 8-1/2"

First USED ON CAR SERIAL NOS. 826

FIRST USED ON CAR SERIAL NOS. 756, Also used on Modernized Cars with Gear Lock Braces. Used on Cars with Long Wings. Last used on Cars with Short Ditcher Wing, Car 822

REPAIR PARTS LIST

O. F. JORDAN CO.
EAST CHICAGO, INDIANA — U. S. A.

PAGE NO. 18-Aa

Date 9-20-37 Revised 1-10-55

Model

PART NO.	NO. PER CAR	DESCRIPTION
3083-A	1	Air Tank - Horizontal
31586	1	Safety Valve
31635	1	Vertical Check Valve
31582	1	Cutout Cock, tank drain
31632	1	Gas Lock Cock, tank to train line
31633	1	Cutout Cock, tank to auxiliary inlet air line
<u>MANIFOLD VALVES</u>		
31523	1	Valve for raising and lowering front plow
376	1	Handle for front plow valve
31480	1	Foot Valve for plow lock cylinder
31522	2	Valve for raising and lowering main wings
M-4	2	Handle for raising and lowering main wing valve
31521	2	Valve for raising wing top diagonal brace
M-2	2	Handle for diagonal brace valve
31480	2	Foot valve for diagonal brace lock cylinder
31521	2	Valve for opening and closing main wings
M-2	2	Handle for opening and closing main wing valve
31492	2	Foot Valve for horizontal wing brace lock cylinder
31521	2	Valve for raising and lowering bank sloper
M-2	2	Handle for bank sloper valve
31480	2	Foot Valve for bank sloper lock cylinder (on main wing)
31520	2	Valve for opening and closing carrier wing
M-2	2	Handle for carrier wing valve
31480	2	Foot valve for carrier wing brace lock cylinder
31521	2	Valve for raising and lowering sliding ditch section
M-2	2	Handle for sliding ditch section valve
373	9	Foot Pedals for foot valves
3519	9	Spring for foot valve pedals
31582	1	Emergency brake cock
31633	2	Manifold cutout cock
M-3	2	Cutout cock handle
31025	1	Air Gage, grad. 200 lbs. in cab
31650	1	Whistle
31540	1	Cutout Cock for whistle
31633	1	Cutout Cock for train line hose through Snow Plow
3320-500	1	Air hose assembly for train line through Snow Plow