

# SKY-HI

TRADE MARK

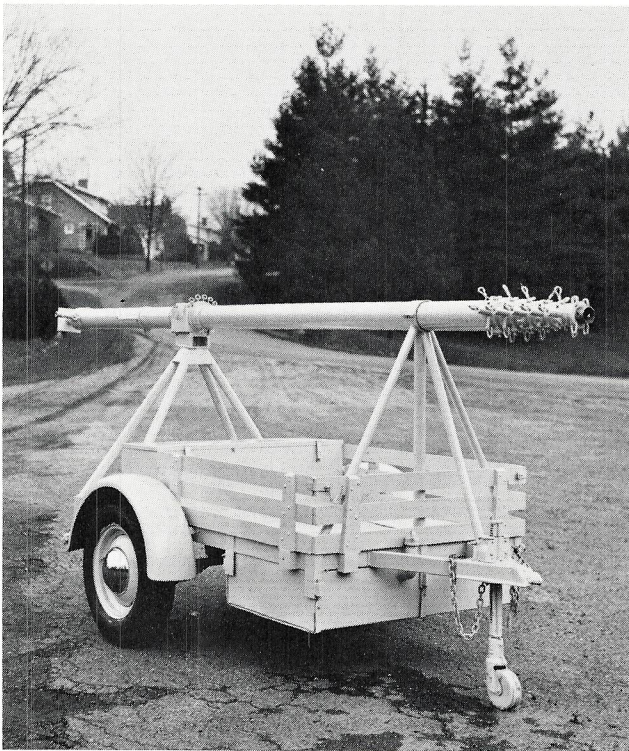
## TELESCOPING MAST

**LIGHT WEIGHT  
COMPACT • STURDY**

**ADAPTABLE TO  
STATION WAGON,  
VAN, OR  
TRAILER MOUNT**



***FOR MODERN COMMUNICATION  
OR SURVEILLANCE ANYWHERE!***



FOR ADDITIONAL INFORMATION ON LARGER TELESCOPING MAST REQUIREMENTS TO MAXIMUM OF 150 FEET, PLEASE CONTACT OUR OFFICE

**FULL MOBILITY** of telecommunications equipment is easy to manage with SKY-HI TELESCOPING MASTS FOR STATION WAGONS. Mast-carrying vehicles with gear for microwave transmission are effective at construction sites, camping areas, riot and disaster locations, sporting events, educational TV classrooms, and observation points for weather, traffic and marketing reports.

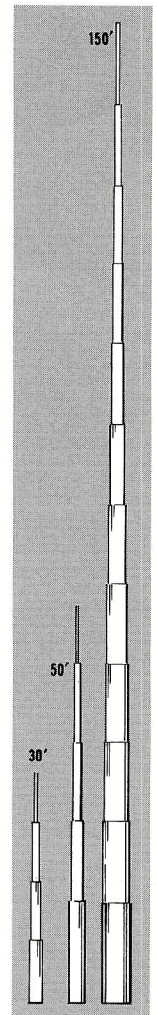
**THE SKY-HI TELESCOPING MAST** is mounted on the floor of a station wagon (or van) and extends through the roof. Nested height of the retracted assembly is 6 feet above vehicle floor, usually exposing about 15 inches above the vehicle roof. Antenna stub shown in photo above is detachable. Canvas cover is provided for exposed part of nested mast.

**THE SKY-HI MAST** extends to a height of 30 feet, and will support a top load of 25 pounds on a parked or moving vehicle. Variations in design or extended height are available on special order. Experienced craftsmen outfit vehicles at the WILL-BURT plant where masts are manufactured, or we provide mounting instructions and hardware. A full line of accessory equipment is also available.

**THE SKY-HI MAST** operates smoothly with no metal-to-metal contact . . . extending rapidly and retracting by a pneumatic system. Mast sections are keyed to retain fixed alignment. The assembly is rotatable from within the vehicle. An azimuth ring is mounted on the ceiling, and a directional pointer is mounted on the base section of the mast. Elevated antenna can be locked at base of mast for fixed orientation.

**THE SKY-HI MAST** is made of materials selected and pre-tested for strength, light weight, and best environmental resistance. Full operating instruction manual provided, along with our warranty on workmanship and materials.

**SHOULD YOU** already have a SKY-HI MAST, you will be interested in knowing that a full line of spare and replacement parts is maintained at the factory.



Telephone Area 216  
**682-7015**

THE **WILL-BURT** COMPANY

202 SOUTH MAIN STREET • ORRVILLE, OHIO 44667



**TELESCOPING MAST**

**MFG. BY T.M.D. DIVISION**

**WOOSTER, OHIO 44691**







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**216 - 262-7010**



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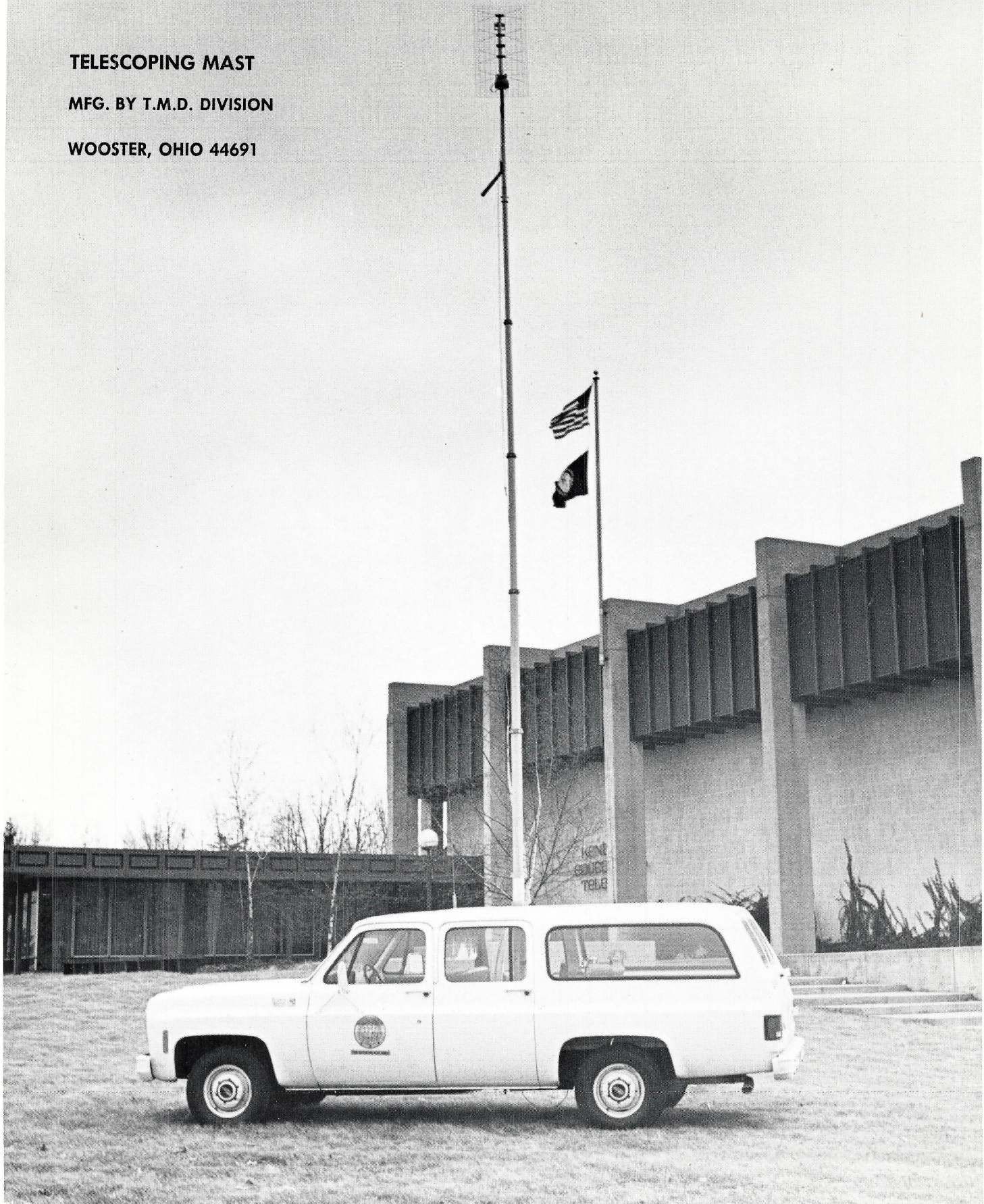




**TELESCOPING MAST**

**MFG. BY T.M.D. DIVISION**

**WOOSTER, OHIO 44691**





1911 Fieldcar

# TELESCOPING MAST ASSEMBLY

MODEL NUMBER \_\_\_\_\_

SERIAL NUMBER \_\_\_\_\_

- I      INSTALLATION
- II     RAISING MAST
- III    LOWERING MAST
- IV     MAINTENANCE
- V      REPLACING SEALS
- VI     SPARE OR REPLACEMENT PARTS



PACKING LIST

MODEL TMD-6-26-PAV

1 EACH - MAST ASSEMBLY	TMD-C-130
1 EACH - EXTENSION TUBE	TMD-B-5193
1 EACH - WEATHER BONNET	TMD-B-5131
1 EACH - ROOF FLANGE W/GASKET	TMD-B-588
1 EACH - BOTTOM ROOF PLATE W/GASKET	TMD-B-586
1 EACH - TURNING HANDLE	TMD-B-577
1 EACH - BASE PLATE	TMD-B-579
2 EACH - LOCKING SCREW	TMD-A-576
1 EACH - CANVAS TOP COVER	TMD-A-3215
1 EACH - THREADED ROD 1/4"-20 x 2' (CUT TO DESIRED LENGTH)	
12 EACH - ACORN NUT 1/4"-20	
4 EACH - BASE PLATE SPACER	TMD-A-5571
4 EACH - 3/8"-16 x 2-1/2" HEX BOLT	
4 EACH - 3/8"-16 HEX NUT	
4 EACH - 3/8" LOCKWASHER	
1 EACH - INSTRUCTION	



W A R N I N G

THIS UNGUYED VEHICLE MOUNTED MAST WAS DESIGNED FOR  
A LIGHT TOP LOAD AND RAISED FOR SHORT PERIODS OF  
TIME DURING NORMAL WEATHER CONDITIONS. WHEN EXTENDED  
IT SHOULD NOT BE LEFT UNATTENDED DUE TO THE POSSI-  
BILITY OF ADVERSE WEATHER CONDITIONS. THE MANUFACTURER  
DOES NOT ACCEPT ANY RESPONSIBILITY FOR DAMAGE OR INJURY  
IF MISUSED.

TMD DIVISION

THE WILL-BURT COMPANY

WOOSTER, OHIO 44691



## I - INSTALLATION

1. SELECT A FLAT, LEVEL AREA FOR THE LOCATION OF THE BASE PLATE. MAKE CERTAIN THERE IS NO WIRING OR OTHER OBSTRUCTIONS UNDER THE FLOOR IN THIS AREA. THE ROOF AREA ABOVE SHOULD BE FLAT.
2. LOOSEN THE LOCKING SCREWS AND SLIDE THE BASE PLATE OFF THE MAST. USING THE BASE PLATE AS A TEMPLATE LOCATE AND DRILL THE HOLES TO ATTACH THE BASE PLATE. ALLOW ENOUGH SPACE FROM ANY WALL FOR THE TURNING HANDLES TO ROTATE.
3. AFTER THE BASE PLATE HAS BEEN SECURED LOCATE THE HOLE IN THE ROOF. THIS HOLE MUST BE PERPENDICULAR TO THE BASE PLATE. AFTER CAREFULLY LOCATING, CUT A HOLE IN THE ROOF ONLY LARGE ENOUGH FOR THE MAST BASE TUBE TO GO DOWN THROUGH. IF THE VEHICLE HAS AN INSIDE ROOF LINER IT MAY BE ADVISABLE TO REMOVE IT BEFORE CUTTING THE HOLE IN THE ROOF.
4. SLIDE THE WEATHER BONNET, ROOF FLANGE AND (1) RUBBER GASKET UP THE MAST SO IT IS JUST BELOW THE BOTTOM COLLAR ON THE MAST. SOAPY WATER AROUND THE INSIDE OF THE WEATHER BONNET WILL EASE SLIDING IT. THEN CAREFULLY LOWER THE MAST DOWN THRU THE HOLE IN THE ROOF. BEFORE THE MAST IS LOWERED TO THE BASE PLATE SLIDE THE OTHER RUBBER GASKET AND BOTTOM ROOF PLATE ON THE MAST. NOW LOWER THE MAST ONTO THE BASE PLATE.
5. LOCATE THE ROOF FLANGE IN POSITION SO THE MAST CAN BE FREELY TURNED. USING THE ROOF FLANGE AS A TEMPLATE LOCATE AND DRILL THE HOLES FOR ATTACHING THE ROOF FLANGE, RUBBER GASKETS, AND BOTTOM PLATE. IT IS ADVISABLE TO APPLY A BEAD OF SILICONE SEAL TO BOTH SURFACES OF THE RUBBER GASKET THAT IS OUTSIDE THE VEHICLE. TIGHTEN ALL NUTS SECURELY. IF THE INSIDE ROOF LINER WAS REMOVED CAREFULLY LOCATE AND CUT A HOLE IN IT FOR THE MAST. THEN RAISE THE MAST ENOUGH TO SLIP THE ROOF LINER OVER THE BOTTOM OF THE MAST AND FASTEN IN PLACE. LOWER THE MAST ON THE BASE PLATE AND TURN IN THE LOCKING SCREWS BUT DO NOT TIGHTEN.
6. THE WEATHER BONNET CAN NOW BE SLID DOWN OVER THE ROOF FLANGE.
7. LOCATE THE TURNING HANDLES AT THE DESIRED HEIGHT AND TIGHTEN. ONLY TIGHTEN ENOUGH SO THEY DO NOT SLIP ON THE MAST. DO NOT OVER TIGHTEN.
8. AIR MAY BE PROVIDED TO OPERATE THE MAST FROM AN AIR COMPRESSOR, AIR TANK OR OTHER SOURCE. AN AIR VALVE WITH AN EXHAUST POSITION ON IT IS DESIRABLE, HOWEVER, A GLOBE VALVE AND A PETCOCK CAN BE USED. AN AIR PRESSURE REGULATOR MUST BE USED AND SET TO ALLOW NO MORE THAN 10 TO 15 P.S.I. MAXIMUM AIR PRESSURE TO THE MAST. THE MAST SHOULD NEVER BE OPERATED AT MORE THAN 20 P.S.I. AS DAMAGE OR INJURY COULD RESULT. THE PLUMBING CAN BE DONE WITH EITHER RUBBER HOSE OR COPPER TUBE. THE AIR INLET TO THE MAST LOCATED IN THE ORIFICE BLOCK ON THE BOTTOM OF THE BASE PLATE IS TAPPED FOR 1/4" N.P.T.



## I INSTALLATION (CONTINUED)

9. A CANVAS TOP COVER IS PROVIDED AND SHOULD BE SECURELY TIED OVER THE TOP OF THE MAST WHEN NOT IN USE.

## II RAISING MAST

1. THE VEHICLE SHOULD BE LOCATED ON LEVEL TERRAIN SO THE MAST WILL BE VERTICAL WHEN EXTENDED.
2. REMOVE THE CANVAS TOP COVER AND INSTALL THE MAST EXTENSION TUBE IF BEING USED.
3. THE MAST CAN NOW BE RAISED. BE SURE AN AIR PRESSURE REGULATOR IS BEING USED AND SET AT A MAXIMUM OF 10 TO 15 P.S.I.
4. IT IS NOT RECOMMENDED THAT THE VEHICLE BE MOVED WHEN THE MAST IS EXTENDED BUT IF IT MUST BE MOVED WITH THE MAST EXTENDED IT SHOULD BE DONE VERY CAUTIOUSLY AT A VERY SLOW SPEED. AVOID ANY ABRUPT STARTS OR STOPS. WATCH FOR OVERHEAD WIRES, TREES, ETC.
5. FOR TOP LOAD LIMITATIONS OF THIS MAST CONTACT THE FACTORY.

## III LOWERING MAST

1. TO LOWER THE MAST EXHAUST THE AIR BY MEANS OF THE EXHAUST POSITION ON THE AIR VALVE OR A PETCOCK IF ONE IS BEING USED.
2. WHEN THE MAST HAS NESTED REMOVE THE MAST EXTENSION TUBE, IF BEING USED AND REPLACE THE CANVAS TOP COVER.

## IV MAINTENANCE

1. OCCASIONALLY EACH MAST TUBE SHOULD BE WIPED CLEAN AS IT IS BEING RAISED OR LOWERED. AT THE SAME TIME A SMALL AMOUNT OF LIGHT OIL CAN BE INJECTED INTO EACH TUBE THRU THE 1/8" DIA. DRAIN HOLES. DO NOT OVER OIL.

## V REPLACING SEALS

1. TO REPLACE A SEAL IT IS MORE CONVENIENT TO PLACE THE MAST HORIZONTALLY ON A PAIR OF SAW HORSES OR SIMILAR SUPPORTS.
2. REMOVE THE COLLAR BOLTS FROM THE COLLAR ABOVE THE SEAL TO BE REPLACED. THEN WITH A MALLET CAREFULLY TAP THE COLLAR OFF THE END OF THE TUBE. SLIDE THE TUBE OUT.



V     REPLACING SEALS (CONTINUED)

3. REMOVE THE ORIFICE BOLT, LOCKWASHER, BACK-UP WASHER, EXPANDER AND SEAL. NOTE HOW THEY ARE INSTALLED. RE-ASSEMBLE WITH A NEW SEAL.
4. CARE MUST BE TAKEN WHEN THE NEW SEAL IS INSERTED BACK INTO THE TUBE. THE LIP OF THE SEAL MUST BE WORKED IN CAREFULLY TO PREVENT DAMAGE. A SMALL AMOUNT OF LIGHT OIL ON THE SEAL AND IN THE TUBE WILL BE HELPFUL.
5. REPLACE THE COLLAR AND COLLAR BOLTS. DO NOT OVER TIGHTEN THE COLLAR BOLTS.

VI     SPARE OR REPLACEMENT PARTS

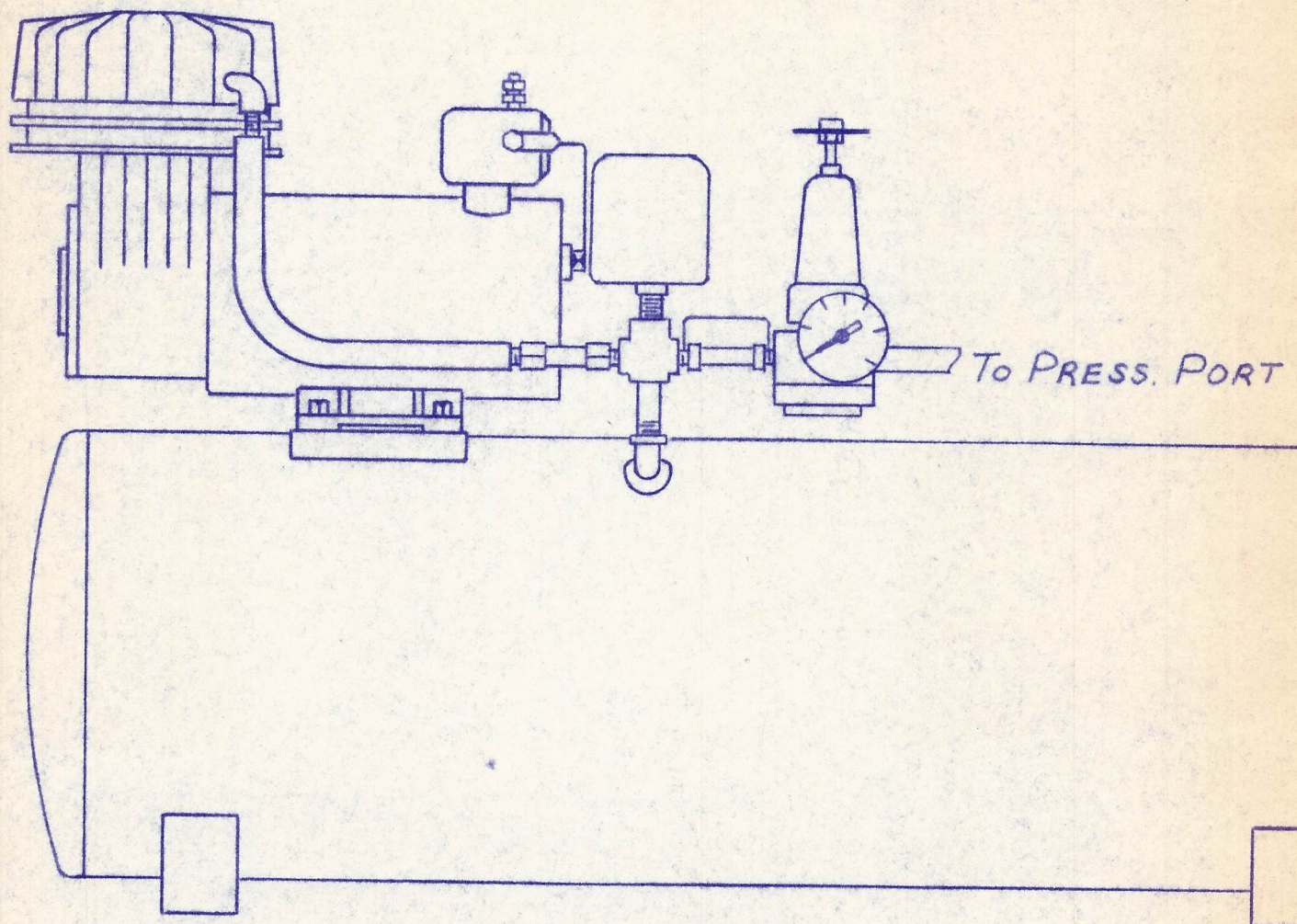
1. TO ORDER PARTS REFER TO DRAWING NUMBER, PART NUMBER, AND DESCRIPTION.
2. WHEN ORDERING COLLARS OR TUBES ALSO REFER TO THE MAST SERIAL NUMBER LOCATED AT THE BOTTOM OF THE MAST.

SEND ALL INQUIRIES TO:    TMD DIVISION  
                                 THE WILL-BURT COMPANY  
                                 P. O. BOX 126  
                                 WOOSTER, OHIO 44691  
  
                                 PHONE: 216-262-7010



CHECK VALVE  
 PRESSURE SWITCH  
 AIR GAUGE  
 GLOBE VALVE  
 PRESSURE REGULATOR  
 6'  $\frac{3}{8}$ " DIA. AIR HOSE WITH QUICK COUPLER

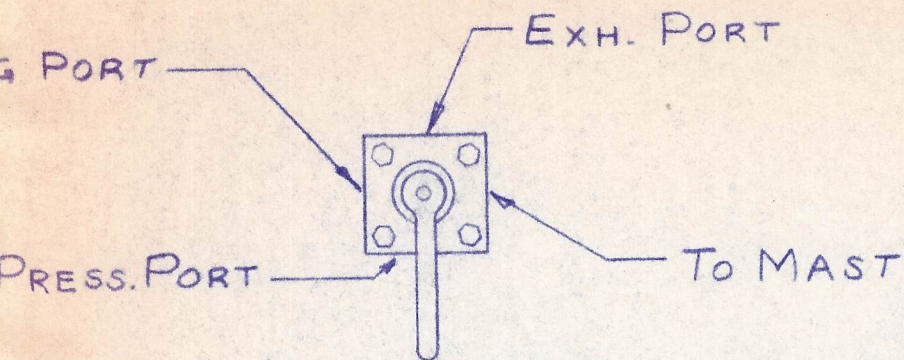
PLUG REMAINING



STD. TANK - 10" DIA. x 28" LONG (10 GAL.)  
 COMPRESSOR - 7" WIDE x 10" HIGH x 13" LONG  
 OPT. TANK - 6 $\frac{1}{2}$ " DIA. x 25" LONG (3 GAL.)

CHG.	





AIR CONTROL VALVE  
(OPTIONAL)

THE **WILL-BURT** COMPANY  
TELESCOPING MAST DIVISION

12 VOLT AIR COMPRESSOR ASS'Y  
1/2 H.P. - 1.8 C.F.M.

DRN. BY  
P.F.

DATE  
3-8-76

JOB No.

MATERIAL

SCALE

TOLERANCE

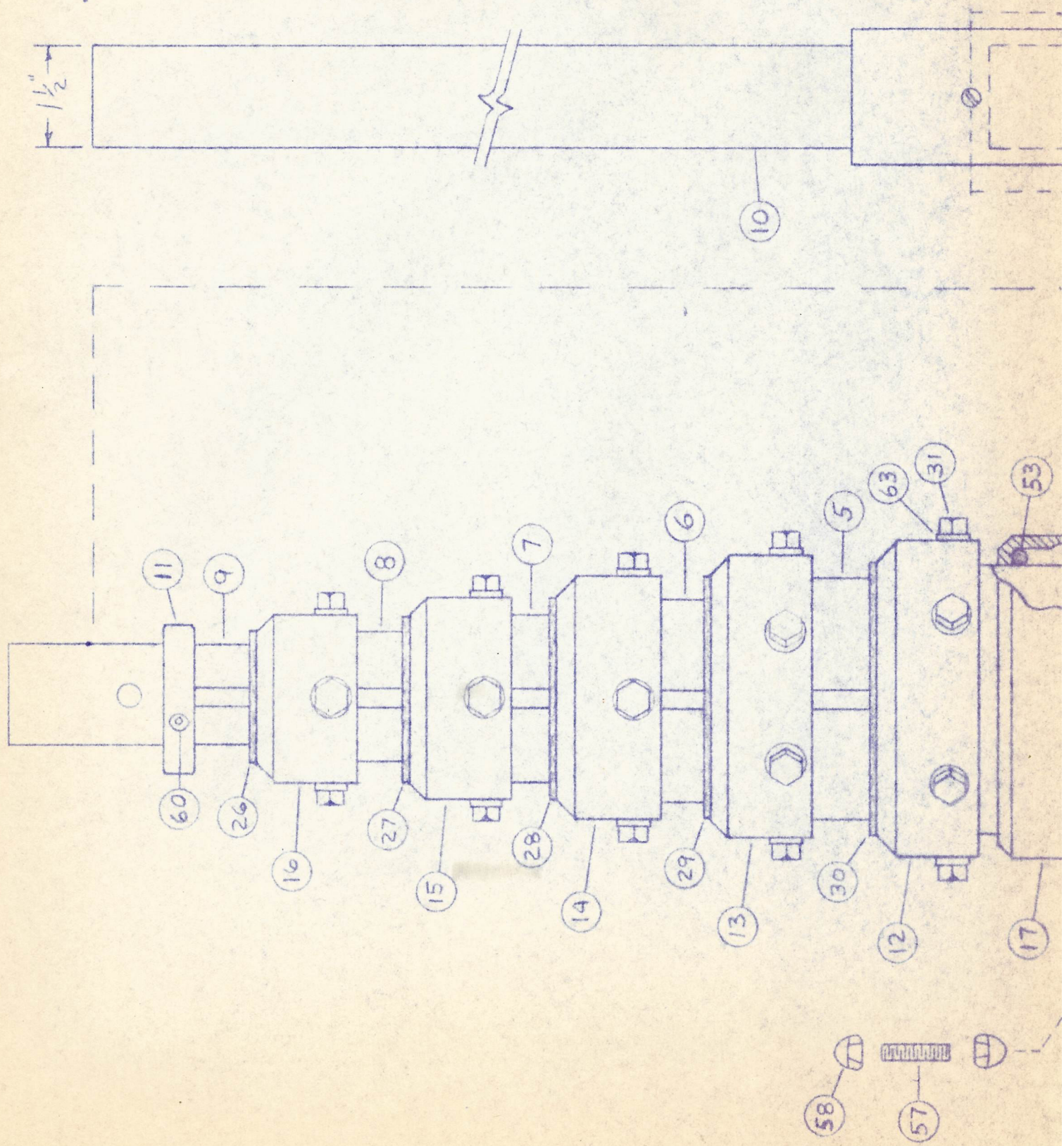
DWG. No.

TMD-B-253

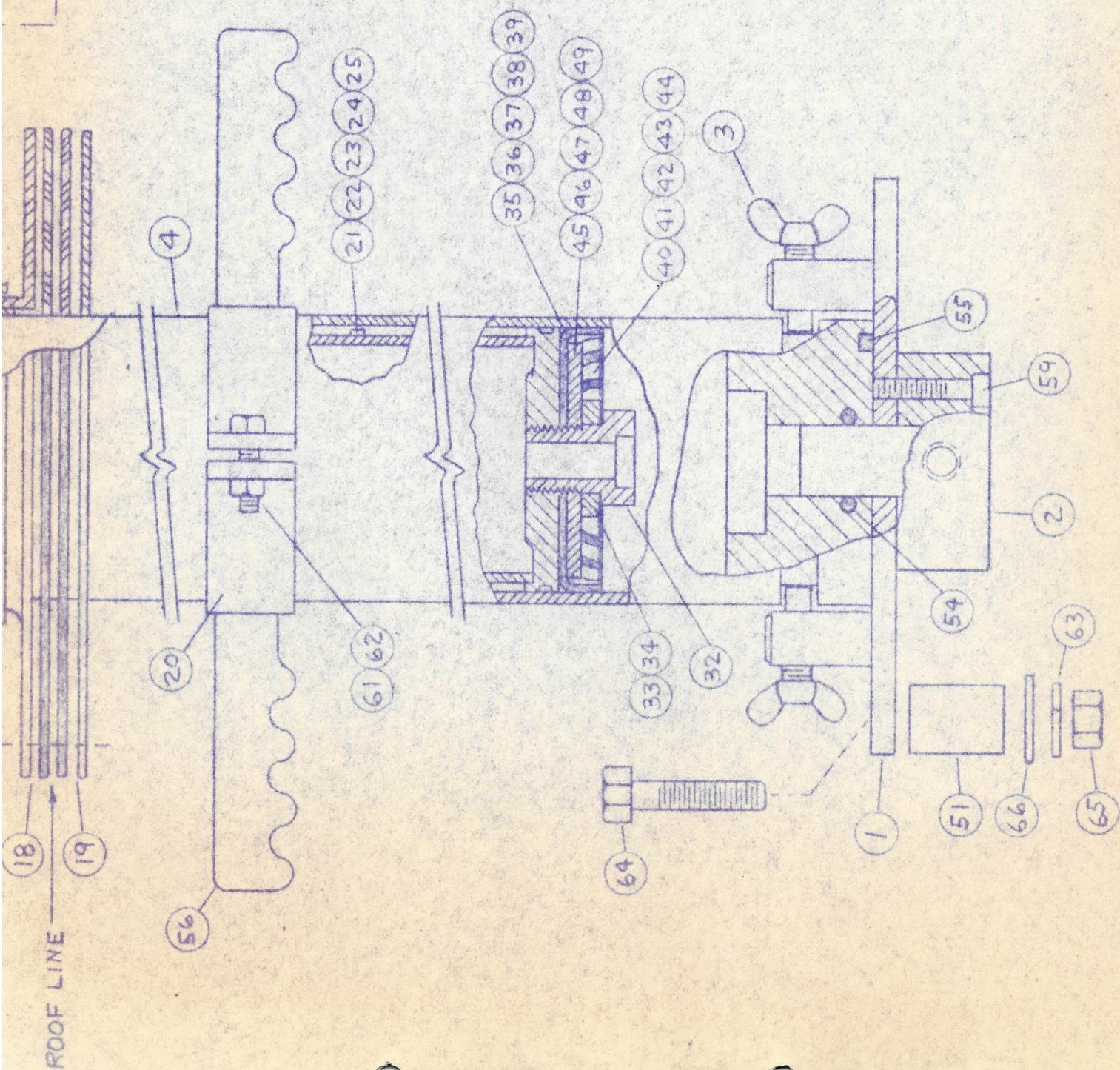
BY

DATE











MK	PART NO	QTY	DESCRIPTION	MK	PART NO	QTY	DESCRIPTION
1	TMD-B-579	1	BASE PLATE	26	TMD-B-5105-1	1	EXT. BUMPER
2	TMD-B-580	1	ORIFICE, BLOCK	27	TMD-B-5105-2	1	EXT. BUMPER
3	TMD-A-576	2	LOCKING SCREW	28	TMD-B-5105-3	1	EXT. BUMPER
4	TMD-B-5436	1	BOTTOM MAST TUBE	29	TMD-B-5105-4	1	EXT. BUMPER
5	TMD-B-5190	1	MAST TUBE	30	TMD-B-5105-5	1	EXT. BUMPER
6	TMD-B-5191-3	1	MAST TUBE	31	TMD-A-548	24	COLLAR BOLT
7	TMD-B-5191-2	1	MAST TUBE	32	TMD-A-5485	5	ORIFICE BOLT
8	TMD-B-5191-1	1	MAST TUBE	33	TMD-A-5576-1	4	FLAT WASHER
9	TMD-B-5192	1	TOP MAST TUBE	34	TMD-A-5576-2	1	FLAT WASHER
10	TMD-B-5193	1	EXTENSION TUBE	35	TMD-B-575-1	1	SEAL
11	TMD-A-5196	1	TOP TUBE STOP	36	TMD-B-575-2	1	SEAL
12	TMD-B-5194-1	1	COLLAR	37	TMD-B-575-3	1	SEAL
13	TMD-B-5194-2	1	COLLAR	38	TMD-B-575-4	1	SEAL
14	TMD-B-5195-1	1	COLLAR	39	TMD-B-575-5	1	SEAL
15	TMD-B-5195-2	1	COLLAR	40	TMD-B-574-1	1	EXPANDER
16	TMD-B-5195-3	1	COLLAR	41	TMD-B-574-2	1	EXPANDER
17	TMD-B-5131	1	WEATHER BONNET	42	TMD-B-574-3	1	EXPANDER
18	TMD-B-588	1	ROOF FLANGE W/ GASKET	43	TMD-B-574-4	1	EXPANDER
19	TMD-B-586	1	BOTTOM PLATE W/ GASKET	44	TMD-B-574-5	1	EXPANDER
20	TMD-B-577	1	TURNING HANDLE	45	TMD-B-502-1	1	BACK UP WASHER
21	TMD-B-5104-1	1	INT. BUMPER	46	TMD-B-502-2	1	BACK UP WASHER
22	TMD-B-5104-2	1	INT. BUMPER	47	TMD-B-502-3	1	BACK UP WASHER
23	TMD-B-5104-3	1	INT. BUMPER	48	TMD-B-502-4	1	BACK UP WASHER
24	TMD-B-5104-4	1	INT. BUMPER	49	TMD-B-502-5	1	BACK UP WASHER
25	TMD-B-5104-5	1	INT. BUMPER	50	TMD-A-3215	1	CANVAS TOP COVER
				51	TMD-A-5571	4	SPACER
				52	TMD-B-9111	1	SHIPPING CRATE
				53		1	"O" RING 4" x 4 3/8"
				54		1	"O" RING 1" x 1 1/4"
				55		1	SQ. FELT 1/4"



