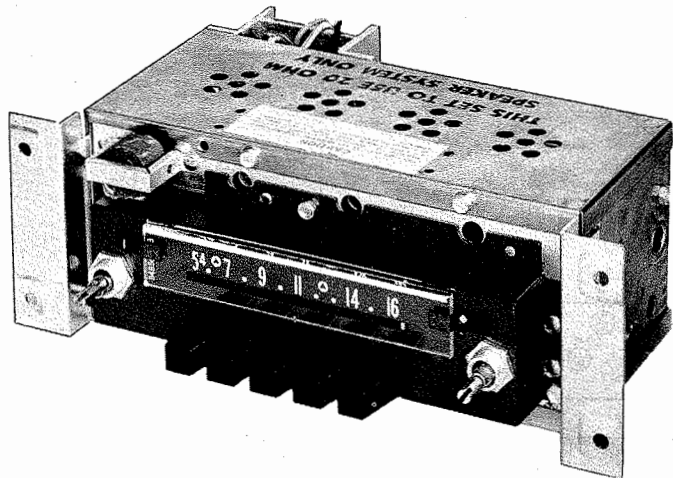


INTERNATIONAL HARVESTER MODELS
244079-R91 (04MI), 244113 (04MI-RV)

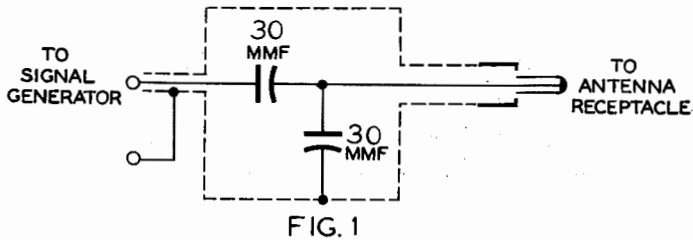


| | | | |
|------------------------|---|--------|-----------------------|
| TRADE NAME | International Harvester Model 244113-R91 (04MI-RV) For 1961 R and V Line Trucks Model 244079-R91 (04MI) For 1961 Scout and C Line Trucks | | |
| MANUFACTURER | Motorola Inc., 4545 W. Augusta Blvd., Chicago 51, Illinois | | |
| TYPE SET | Battery Operated 4 Tube - 3 Transistor Truck AM Receiver | | |
| POWER SUPPLY | 12 Volt Storage Battery | RATING | 1 Amp. @12.6 Volts DC |
| TUNING RANGE—BROADCAST | 540 — 1610KC | | |

ALIGNMENT INSTRUCTIONS

| ALIGNMENT INSTRUCTIONS—READ CAREFULLY BEFORE ATTEMPTING ALIGNMENT | | | | | |
|---|----------------------------|--|--------------------|----------------|---|
| Volume control should be at maximum position. Output of signal generator should be no higher than necessary to obtain an output reading. | | | | | |
| Suggested Alignment Tools: | | | | | |
| A1 thru A4.....GENERAL CEMENT #8282, 8606, 8606-L, 9295, 9440 WALSCO #2526, 2543, 2544, 2545 | | | | | |
| A5, A6, A7.....GENERAL CEMENT #5004, 5009, 8195, 8274, 8275, 8607, 8728, 8987, 8988, 8989, 9291 WALSCO #2515, 2520, 2522, 2523, 2531, 2532, 2534, 2537, 2538 | | | | | |
| A8, A9, A10.....GENERAL CEMENT #9050-L, 9150 WALSCO #2521, 2524 | | | | | |
| SIGNAL GENERATOR COUPLING | SIGNAL GENERATOR FREQUENCY | RADIO DIAL SETTING | OUTPUT METER | ADJUST | REMARKS |
| 1. High side thru .1mfd to pin 7 (grid) of Converter. Low side to chassis. | 262.5KC (400% Mod.) | High end stop. | Across voice coil. | A1, A2, A3, A4 | Adjust for maximum output. |
| 2. Thru dummy antenna (Fig. 1) to antenna receptacle. | 1610KC | " | " | A5, A6, A7 | " |
| Step 3 is not necessary unless tuner has been tampered with or associated components replaced. If necessary, back tuning cores (A8, A9, A10) out of coils. Repeat step 2. | | | | | |
| 3. Thru dummy to antenna receptacle. | 1020KC | Tuner carriage 9/16" from high end stop. | Across voice coil. | A8, A9, A10 | Adjust for maximum output. Repeat steps 2 and 3. Cement core screws in place. |
| 4. With radio installed in car and antenna fully extended, tune in a weak station near 1400KC and adjust A7 for maximum output. | | | | | |

| PUSHBUTTON ADJUSTMENT |
|---|
| 1. Tune manually to the desired station. |
| 2. Pull out pushbutton, then press in firmly. |
| 3. Repeat for remaining pushbuttons. |



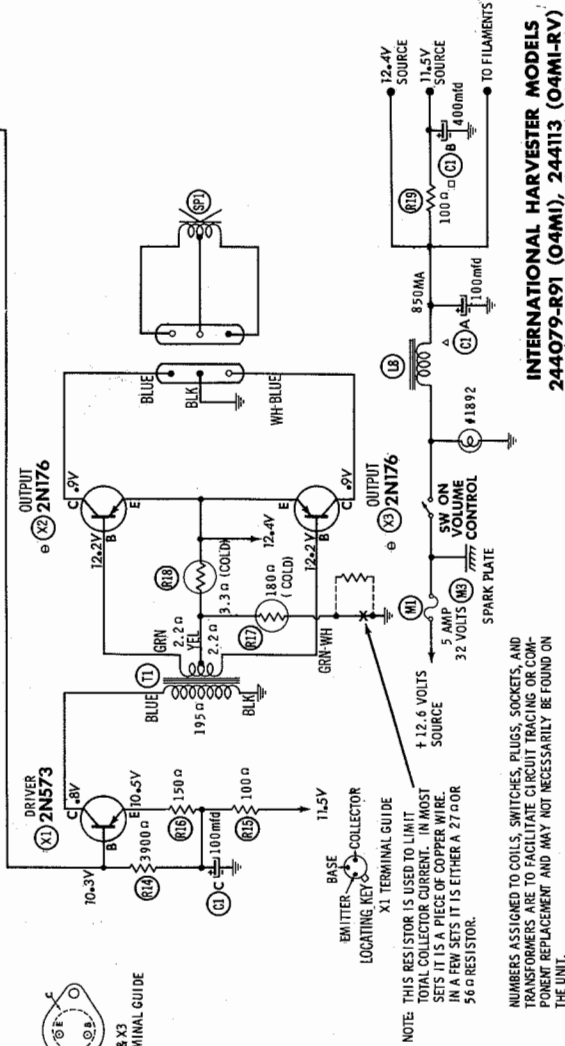
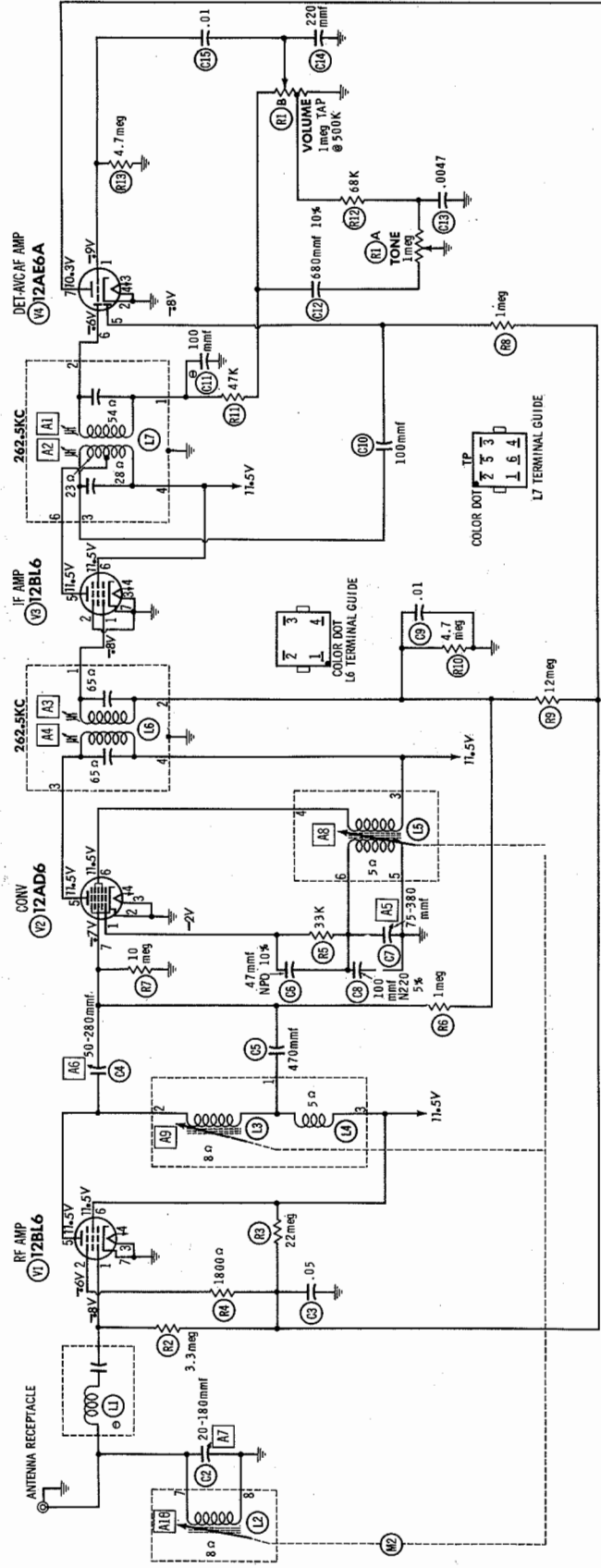
HOWARD W. SAMS & CO., INC. Indianapolis 6, Indiana

The listing of any available replacement part herein does not constitute in any case a recommendation, warranty or guaranty by Howard W. Sams & Co., Inc., as to the quality and suitability of such replacement part. The numbers of these parts have been compiled from information furnished to Howard W. Sams & Co., Inc., by the manufacturers of LD145

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INTERNATIONAL HARVESTER MODELS
244079-R91 (04MI), 244113 (04MI-RV)

SET 580 FOLDER 6



INTERNATIONAL HARVESTER MODELS
244079-R91 (04MI), 244113 (04MI-RV)

| ITEM | TUBE | Pin 1 | Pin 2 | Pin 3 | Pin 4 | Pin 5 | Pin 6 | Pin 7 |
|------|--------|--------|-------|-------|-------|-------|-------|--------|
| V1 | 12BL6 | 13meg | 10meg | FIL | FIL | 110Ω | 100Ω | 0Ω |
| V2 | 12AD6 | 33K | 0Ω | FIL | FIL | 140Ω | 100Ω | 3.4meg |
| V3 | 12BL6 | 3meg | 0Ω | FIL | FIL | 115Ω | 100Ω | 0Ω |
| V4 | 12AE6A | 4.7meg | 0Ω | FIL | FIL | 10meg | 800K | • |

• TRANSISTOR CIRCUIT RESISTANCE NOT GIVEN BECAUSE OF THE WIDE VARIATION IN INTERNAL TRANSISTOR RESISTANCE.

- MEASURED FROM JUNCTION OF L8 & C1A.
- DC voltage measurements taken with vacuum tube voltmeter.
- Socket connections shown as bottom views.
- Measured values are from socket pin to common ground.
- Battery voltage maintained at 12.6 volts for voltage readings.
- Nonlinear tolerance on component values makes possible a variation of 15% in voltage and resistance readings.
- Volume control at maximum, no signal applied for voltage measurements.

A PHOTOFACT STANDARD NOTATION SCHEMATIC
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• SEE PARTS LIST FOR ALTERNATE VALUE OR APPLICATION
DC COIL RESISTANCE VALUES UNDER ONE OHM NOT SHOWN ON SCHEMATIC DIAGRAM

PARTS LIST AND DESCRIPTIONS

WIRING DATA

| | | |
|---|--|--|
| General-use Unshielded Hook-up Wire | | Use BELDEN No. 8530 (Solid) Available in 12 Colors |
| Shielded Hook-up Wire | | 8524 (Stranded) Available in 12 Colors |
| Bonding Strap | | Use BELDEN No. 8885 |
| | | Use BELDEN No. 8861 (3/8 In.) or 8670 (3/4 In.) |

TUBES

| ♦ GENERAL ELECTRIC ♦ | | ♦ RAYTHEON ♦ | | ♦ SYLVANIA ♦ | |
|----------------------|------------------------|----------------|----------|-------------------|--------|
| ITEM No. | USE | TYPE | ITEM No. | USE | TYPE |
| V1 | RF Amplifier Converter | 12BL8 12AD6 | V3 | IF Amplifier | 12BL8 |
| V2 | | | V4 | Det. -AVC-AF Amp. | 12A66A |

TRANSISTORS

| ITEM No. | ORIG. TYPE | USE | REPLACEMENT DATA | | NOTES |
|----------|------------|--------|------------------|-------------------|--------------|
| | | | RCA PART No. | RAYTHEON PART No. | |
| X1 | 2N573 | Driver | 2N591 | 2N573 | PNP (Note 1) |
| X2 | 2N176 | Output | 2N176 | | PNP (Note 1) |
| X3 | 2N176 | Output | | | PNP (Note 1) |

Note 1. When replacing, apply DC-4 grease (Part #1M490487) or equivalent to both sides of insulator. Tighten mounting screws securely.

ELECTROLYTIC CAPACITORS

| ITEM No. | RATING | CAP. | VOLT. | REPLACEMENT DATA | | | |
|----------|--------|------|-------|-------------------|------------------|---------------------------|---------------------------|
| | | | | MOTOROLA PART No. | AEROVOX PART No. | CORNELL-DUBILIER PART No. | GENERAL ELECTRIC PART No. |
| C1A | 100 | 16 | 16 | 23B64329 | AFH3-100-90 | | XC3-48 |
| C | 100 | 16 | 16 | | | | WF300.5 |

* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

RESISTORS

| ITEM No. | RATING | REPLACEMENT DATA | | ITEM No. | RATING | REPLACEMENT DATA | |
|----------|--------|------------------|------------------|----------|-----------|------------------|------------------|
| | | IRC PART No. | WORKMAN PART No. | | | IRC PART No. | WORKMAN PART No. |
| R2 | 3.3meg | | | R11 | 47K | | |
| R3 | 22meg | | | R12 | 68K | | |
| R4 | 1800Ω | | | R13 | 4.7meg | | |
| R5 | 33K | | | R14 | 3900Ω | | |
| R6 | 1meg | | | R15 | 100Ω | | |
| R7 | 10meg | | | R16 | 150Ω | | |
| R8 | 1meg | | | R17 | 180Ω Cold | | |
| R9 | 12meg | | | R18 | 3.3Ω Cold | | |
| R10 | 4.7meg | | | R19 | 100Ω | | |

All wattages 1/2 watt, or less, unless otherwise listed.

COILS (RF-IF)

| ITEM No. | USE | REPLACEMENT DATA | | | | | NOTES |
|----------|------------|-------------------|----------------|-----------------|------------------|---------------------|-----------------|
| | | MOTOROLA PART No. | Merit PART No. | Miller PART No. | Stancor PART No. | Workman TV PART No. | |
| L1 | RF Choke ① | 24A538910 | | | | | ① Includes Cap. |
| L2 | Ant. | 24B563217 | | | | | |
| L3 | RF | 24B563217 | | | | | |
| L4 | Image Trap | 24B40341A01 | | | | | |
| L5 | Osc. | 24B563214 | | | | | |
| L6 | Input IF | 24K564264 | | 12-HI | RTC-8838 | T904 | |
| L7 | Output IF | 24K564642 | | | | | |

FILTER CHOKE

| ITEM No. | RATINGS | REPLACEMENT DATA | | | | | NOTES |
|----------|--------------|-----------------------|-------------------|----------------|------------------|---------------------|-------|
| | | INDUCTANCE (Measured) | MOTOROLA PART No. | Merit PART No. | Stancor PART No. | Thordarson PART No. | |
| L8 | .850A -4Ω | 1.4ME | 25K564320 | | | | |

TRANSFORMER (DRIVER)

| ITEM No. | TURNS RATIO | REPLACEMENT DATA | | | | NOTES |
|----------|-------------|-------------------|----------------|------------------|---------------------|-------|
| | | MOTOROLA PART No. | Merit PART No. | Stancor PART No. | Thordarson PART No. | |
| T1 | 3.6 1 | 25C563990 | | | | |

SPEAKER

| ITEM No. | TYPE | REPLACEMENT DATA | | NOTES |
|----------|-----------------------------|-------------------------------|---------------|--------------------------------------|
| | | MOTOROLA PART No. | QUAM PART No. | |
| SP1 | SIZE 4"x 8" PM 5"x 7" PM | 50C562408 20Ω CT 20Ω CT | 50C40830A01 | Model 244079-R91 Model 244113-R91 |

FIXED CAPACITORS

| ITEM No. | RATING | REMARKS | REPLACEMENT DATA | | | | |
|----------|-------------|--------------|------------------|--------------------|---------------------------|------------------|------------------|
| | | | AEROVOX PART No. | CENTRALAB PART No. | CORNELL-DUBILIER PART No. | ELWENCO PART No. | MALLORY PART No. |
| C2 | 20-180 | #20BA0478A01 | | | | | |
| C3 | .05 | | | | | | |
| C4 | 50-280 | #20A77536 | BPD-05 | DD-503 | | | 5HK-580 |
| C5 | 470 | | DI-470 | DD-471 | L10T47 | CCD-471 | GP150 |
| C6 | 47 NFO 10% | | NPO-DI 47 | DTZ-47 | C10Q47C | CCTO-470 | GP347 |
| C7 | 75-380 | #20K564643 | | | | | CNO-447 |
| C8 | 100 N220 5% | #21R124032 | | | | | 10TCC-Q47 |
| C9 | .01 | | | | | | 10TCR-T10 |
| C10 | 100 | | BPD-01 | DD-103 | BYA10S1 | CCD-103 | GP110 |
| C11 | 100 | | DI-100 | DD-101 | DD-101 | CCD-101 | GP310 |
| C12 | 680 10% | Note 1 | DI-100 | DD-101 | L10T1 | CCD-101 | GP310 |
| C13 | .0047 | | BPD-0047 | DD-681 | | CCD-681 | GP368 |
| C14 | 220 | | DI-220 | DD-472 | BYA10D47M | CCD-472 | GP247 |
| C15 | .01 | | BPD-01 | DD-221 | L10T22 | CCD-221 | GP322 |
| | | | | DD-103 | BYA10S1 | CCD-103 | GP110 |

Note 1. Not used in Model 24413-R91.
Motorola Part Number.
* Not normally in distributor's stock. Available thru distributor on order to manufacturer.

CONTROLS

| ITEM No. | USE | RESISTANCE | REPLACEMENT DATA | | | |
|----------|-----------------------------------|--------------------------|-------------------|--------------------|--------------------|------------------|
| | | | MOTOROLA PART No. | CENTRALAB PART No. | CLAROSTAT PART No. | CTS-IRC PART No. |
| RIA | Tone Volume (Power Off-On Switch) | 1meg 1meg 500K Tap | 18K564325 | F1-54, R2-60 | | † QJ-1359A |
| B | | | KR-4 | | | † QJ-1359A |

† "CONCENTRIKIT" Equivalent: E-15 Kit with base elements and shafts:

BU-137, P14-112 (Panel)

BU9-157X, RI-122 (Rear)

76-1 (Switch)

* "STA-LOC" Equivalent: FBU6L, RUI6T55, OS1375, ISI750, USA1

FUSES

| ITEM No. | TYPE | RATING | REPLACEMENT DATA | | | |
|----------|------|--------|-----------------------|--------------------------|----------------|--------|
| | | | MOTOROLA PART No. | ITTTELFUSE PART No. | BUSS PART No. | |
| M1 | SFE | 5A 32V | FUSE HOLDER 68R122345 | FUSE 307005 (SFE 5A 32V) | FUSE SFE 7 1/2 | HOLDER |

MISCELLANEOUS

| ITEM No. | PART NAME | MOTOROLA PART No. | NOTES |
|----------|-------------------|-------------------|-------------------------------------|
| M2 | Tuner Spark Plate | 77K562911 | |
| M3 | | 64K535182 | (AT-278) Complete (pushbutton Type) |

CABINETS & CABINET PARTS

(When Ordering Cabinets & Cabinet Parts, Specify Model, Chassis & Color)

| NAME | PART NO. | DESCRIPTION |
|--------------|-----------|----------------|
| Dial Scale | 34B502853 | |
| Dial Pointer | 1K582711 | |
| Pushbutton | 38B562848 | |
| Knob | 38B564318 | Tuning, Volume |
| Knob | 1A564327 | Tone, Dummy |

