

Issue 207

PS

PSD Series

February

THE PREVENTIVE MAINTENANCE MONTHLY

HEY, TIGER!
THEM AIN'T NO GOOD
SOUNDERS... YOU BETTER
CHECK THE PM ON YOUR
RIGHTWING.



DO IT RIGHT...

The First Time

*"Why is it that we
do the
But we always have*

You've heard that one. And, maybe you've seen it happen in real life. Your good sense tells you that it wastes your time, your outfit's supplies and Uncle's money to build a job or do it wrong. So, when you do a maintenance job, do it right. If it's something as simple as checking the air in your tires, or the coolant in the radiator, or cleaning and lubing your rifle, make sure you do it right. Or, if it's a big job like doing a scheduled maintenance

*never have time to
job right,
time to do it over?"*

service on your SP artillery, do it right. If maintenance is done wrong, it could lead to damaged or destroyed equipment. It could even mean the enemy gets you instead of you him. Wrong maintenance is serious. Some people have a name for doing the job right — Zero Defects. It's just another way of saying: Do your maintenance job right — the first time.



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Do it right the first time. It's the only way to make sure your equipment is working properly and your mission is successful. Do it right the first time.

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Right Now. Go
NOW!





BY TONY CORNELL

81-MM AND



HERE'S A
QUICK
LOOK AT
THE
81-MM.

Look your mortar over with a hairy eyeball before the inspectors come around. They can't gig you for a fault if you find it and fix it before they see it.

The name of the game is the same whether your mortar is an 81-MM or a 4.2-inch.

Make sure everything is *Proper* and *Pro* as in like the handy-dandy PG tips — *PG* reminds you. To be precise and accurate — *PG* can itemize as the complete and in operating condition without being loose, bent, broken, cracked or worn out beyond your ability to fix it.

The pencil and clipboard boys won't give you any points for style and polish as long as

4.2-IN MORTARS

for your dress. Painting over your medals, your shoulder boards and painting the rest of things makes them more correct, it's a war gig.

81-MM MORTAR

There's a lot more to the 81-MM mortar than meets the eye. First name, you could have any one of over 1 dozen different kinds depending on the combination of baseplate, barrel and mount.



BARRIS

Not drilled or cut off round. Inside of barrel clean, lightly oiled; no puddle of oil, dirt or powder loading in bottom of barrel.

Pits 1/4-inch or wider or as much as 3/16-in. deep are OK, but if bigger, you need a new barrel. Ask support to check. They can now request the M203 barrel under FSN 1565-722-5029 50765-285.

Barrel is unacceptable if the end of tube shows too much spot wear, pitting or cracks. (This causes poor accuracy — gas escapes out the end of the tube before the round leaves.)



TRIP PIN PD — Clean by removing from base plug with impact head screw key. FSN 1565-722-5029 50765-285. Clean rod with good steel cleaning brush. FSN 1565-722-5029 50765-285.

BARRIS M20 — Barrel ring moves smoothly through roller rings (the last 21 inches of barrel). Barrel blocks not cracked throughout working area. (A too-working area it makes no difference.) White paint on markers 17 and 21 inches from barrel end not chipped or cracked. Base played best. Mounted base (cylindrical protruded) base ends in minor socket.



BARRIS M20 — Same as M20 issued without the 17 and 21 markers painted white — go paint 'em.

Basic input forms for the 50-50M monitor are listed in appendix III to CB-4 (Jan-87) to TMD-50M-4 (Aug-87). Basic input forms for the 4.2 monitor are listed on pages B-4 to B-23 in TMD-50M-5 (Oct-87) and 4.2M-2 (Oct-87).

NOTE 3/1/1995:... Whatever kind you have N94, N95, N99, N101, N104, N105, N106, N107, N108, N109, N110, N111, N112, N113, N114, N115, N116, N117, N118, N119, N120, N121, N122, N123, N124, N125, N126, N127, N128, N129, N130, N131, N132, N133, N134, N135, N136, N137, N138, N139, N140, N141, N142, N143, N144, N145, N146, N147, N148, N149, N150, N151, N152, N153, N154, N155, N156, N157, N158, N159, N160, N161, N162, N163, N164, N165, N166, N167, N168, N169, N170, N171, N172, N173, N174, N175, N176, N177, N178, N179, N180, N181, N182, N183, N184, N185, N186, N187, N188, N189, N190, N191, N192, N193, N194, N195, N196, N197, N198, N199, N200, N201, N202, N203, N204, N205, N206, N207, N208, N209, N210, N211, N212, N213, N214, N215, N216, N217, N218, N219, N220, N221, N222, N223, N224, N225, N226, N227, N228, N229, N230, N231, N232, N233, N234, N235, N236, N237, N238, N239, N240, N241, N242, N243, N244, N245, N246, N247, N248, N249, N250, N251, N252, N253, N254, N255, N256, N257, N258, N259, N260, N261, N262, N263, N264, N265, N266, N267, N268, N269, N270, N271, N272, N273, N274, N275, N276, N277, N278, N279, N280, N281, N282, N283, N284, N285, N286, N287, N288, N289, N290, N291, N292, N293, N294, N295, N296, N297, N298, N299, N300, N301, N302, N303, N304, N305, N306, N307, N308, N309, N310, N311, N312, N313, N314, N315, N316, N317, N318, N319, N320, N321, N322, N323, N324, N325, N326, N327, N328, N329, N330, N331, N332, N333, N334, N335, N336, N337, N338, N339, N340, N341, N342, N343, N344, N345, N346, N347, N348, N349, N350, N351, N352, N353, N354, N355, N356, N357, N358, N359, N360, N361, N362, N363, N364, N365, N366, N367, N368, N369, N370, N371, N372, N373, N374, N375, N376, N377, N378, N379, N380, N381, N382, N383, N384, N385, N386, N387, N388, N389, N390, N391, N392, N393, N394, N395, N396, N397, N398, N399, N400, N401, N402, N403, N404, N405, N406, N407, N408, N409, N410, N411, N412, N413, N414, N415, N416, N417, N418, N419, N420, N421, N422, N423, N424, N425, N426, N427, N428, N429, N430, N431, N432, N433, N434, N435, N436, N437, N438, N439, N440, N441, N442, N443, N444, N445, N446, N447, N448, N449, N450, N451, N452, N453, N454, N455, N456, N457, N458, N459, N460, N461, N462, N463, N464, N465, N466, N467, N468, N469, N470, N471, N472, N473, N474, N475, N476, N477, N478, N479, N480, N481, N482, N483, N484, N485, N486, N487, N488, N489, N490, N491, N492, N493, N494, N495, N496, N497, N498, N499, N500, N501, N502, N503, N504, N505, N506, N507, N508, N509, N510, N511, N512, N513, N514, N515, N516, N517, N518, N519, N520, N521, N522, N523, N524, N525, N526, N527, N528, N529, N530, N531, N532, N533, N534, N535, N536, N537, N538, N539, N540, N541, N542, N543, N544, N545, N546, N547, N548, N549, N550, N551, N552, N553, N554, N555, N556, N557, N558, N559, N560, N561, N562, N563, N564, N565, N566, N567, N568, N569, N570, N571, N572, N573, N574, N575, N576, N577, N578, N579, N580, N581, N582, N583, N584, N585, N586, N587, N588, N589, N590, N591, N592, N593, N594, N595, N596, N597, N598, N599, N600, N601, N602, N603, N604, N605, N606, N607, N608, N609, N610, N611, N612, N613, N614, N615, N616, N617, N618, N619, N620, N621, N622, N623, N624, N625, N626, N627, N628, N629, N630, N631, N632, N633, N634, N635, N636, N637, N638, N639, N640, N641, N642, N643, N644, N645, N646, N647, N648, N649, N650, N651, N652, N653, N654, N655, N656, N657, N658, N659, N660, N661, N662, N663, N664, N665, N666, N667, N668, N669, N670, N671, N672, N673, N674, N675, N676, N677, N678, N679, N680, N681, N682, N683, N684, N685, N686, N687, N688, N689, N690, N691, N692, N693, N694, N695, N696, N697, N698, N699, N700, N701, N702, N703, N704, N705, N706, N707, N708, N709, N710, N711, N712, N713, N714, N715, N716, N717, N718, N719, N720, N721, N722, N723, N724, N725, N726, N727, N728, N729, N730, N731, N732, N733, N734, N735, N736, N737, N738, N739, N740, N741, N742, N743, N744, N745, N746, N747, N748, N749, N750, N751, N752, N753, N754, N755, N756, N757, N758, N759, N760, N761, N762, N763, N764, N765, N766, N767, N768, N769, N770, N771, N772, N773, N774, N775, N776, N777, N778, N779, N780, N781, N782, N783, N784, N785, N786, N787, N788, N789, N790, N791, N792, N793, N794, N795, N796, N797, N798, N799, N800, N801, N802, N803, N804, N805, N806, N807, N808, N809, N810, N811, N812, N813, N814, N815, N816, N817, N818, N819, N820, N821, N822, N823, N824, N825, N826, N827, N828, N829, N830, N831, N832, N833, N834, N835, N836, N837, N838, N839, N840, N841, N842, N843, N844, N845, N846, N847, N848, N849, N850, N851, N852, N853, N854, N855, N856, N857, N858, N859, N860, N861, N862, N863, N864, N865, N866, N867, N868, N869, N870, N871, N872, N873, N874, N875, N876, N877, N878, N879, N880, N881, N882, N883, N884, N885, N886, N887, N888, N889, N890, N891, N892, N893, N894, N895, N896, N897, N898, N899, N900, N901, N902, N903, N904, N905, N906, N907, N908, N909, N910, N911, N912, N913, N914, N9



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11



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FROM 1800-1850 Now in color.



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ARMED AND DANGEROUS—As it pieces **P20** with red and white paint in good shape. It's not a pig if pieces are painted as much as the male you wish? It's one together. Games over **P40** nothing. City is covered. **P20**...



How many coats? **Two** (There are several kinds, both leather and canvas.)



1977-1978, 1979-1980, 1981-1982, 1983-1984, 1985-1986, 1987-1988, 1989-1990, 1991-1992, 1993-1994, 1995-1996, 1997-1998, 1999-2000, 2001-2002, 2003-2004, 2005-2006, 2007-2008, 2009-2010, 2011-2012, 2013-2014, 2015-2016, 2017-2018, 2019-2020, 2021-2022, 2023-2024, 2025-2026, 2027-2028, 2029-2030, 2031-2032, 2033-2034, 2035-2036, 2037-2038, 2039-2040, 2041-2042, 2043-2044, 2045-2046, 2047-2048, 2049-2050, 2051-2052, 2053-2054, 2055-2056, 2057-2058, 2059-2060, 2061-2062, 2063-2064, 2065-2066, 2067-2068, 2069-2070, 2071-2072, 2073-2074, 2075-2076, 2077-2078, 2079-2080, 2081-2082, 2083-2084, 2085-2086, 2087-2088, 2089-2090, 2091-2092, 2093-2094, 2095-2096, 2097-2098, 2099-2100, 2101-2102, 2103-2104, 2105-2106, 2107-2108, 2109-2110, 2111-2112, 2113-2114, 2115-2116, 2117-2118, 2119-2120, 2121-2122, 2123-2124, 2125-2126, 2127-2128, 2129-2130, 2131-2132, 2133-2134, 2135-2136, 2137-2138, 2139-2140, 2141-2142, 2143-2144, 2145-2146, 2147-2148, 2149-2150, 2151-2152, 2153-2154, 2155-2156, 2157-2158, 2159-2160, 2161-2162, 2163-2164, 2165-2166, 2167-2168, 2169-2170, 2171-2172, 2173-2174, 2175-2176, 2177-2178, 2179-2180, 2181-2182, 2183-2184, 2185-2186, 2187-2188, 2189-2190, 2191-2192, 2193-2194, 2195-2196, 2197-2198, 2199-2200, 2201-2202, 2203-2204, 2205-2206, 2207-2208, 2209-2210, 2211-2212, 2213-2214, 2215-2216, 2217-2218, 2219-2220, 2221-2222, 2223-2224, 2225-2226, 2227-2228, 2229-2230, 2231-2232, 2233-2234, 2235-2236, 2237-2238, 2239-2240, 2241-2242, 2243-2244, 2245-2246, 2247-2248, 2249-2250, 2251-2252, 2253-2254, 2255-2256, 2257-2258, 2259-2260, 2261-2262, 2263-2264, 2265-2266, 2267-2268, 2269-2270, 2271-2272, 2273-2274, 2275-2276, 2277-2278, 2279-2280, 2281-2282, 2283-2284, 2285-2286, 2287-2288, 2289-2290, 2291-2292, 2293-2294, 2295-2296, 2297-2298, 2299-2300, 2301-2302, 2303-2304, 2305-2306, 2307-2308, 2309-2310, 2311-2312, 2313-2314, 2315-2316, 2317-2318, 2319-2320, 2321-2322, 2323-2324, 2325-2326, 2327-2328, 2329-2330, 2331-2332, 2333-2334, 2335-2336, 2337-2338, 2339-2340, 2341-2342, 2343-2344, 2345-2346, 2347-2348, 2349-2350, 2351-2352, 2353-2354, 2355-2356, 2357-2358, 2359-2360, 2361-2362, 2363-2364, 2365-2366, 2367-2368, 2369-2370, 2371-2372, 2373-2374, 2375-2376, 2377-2378, 2379-2380, 2381-2382, 2383-2384, 2385-2386, 2387-2388, 2389-2390, 2391-2392, 2393-2394, 2395-2396, 2397-2398, 2399-2400, 2401-2402, 2403-2404, 2405-2406, 2407-2408, 2409-2410, 2411-2412, 2413-2414, 2415-2416, 2417-2418, 2419-2420, 2421-2422, 2423-2424, 2425-2426, 2427-2428, 2429-2430, 2431-2432, 2433-2434, 2435-2436, 2437-2438, 2439-2440, 2441-2442, 2443-2444, 2445-2446, 2447-2448, 2449-2450, 2451-2452, 2453-2454, 2455-2456, 2457-2458, 2459-2460, 2461-2462, 2463-2464, 2465-2466, 2467-2468, 2469-2470, 2471-2472, 2473-2474, 2475-2476, 2477-2478, 2479-2480, 2481-2482, 2483-2484, 2485-2486, 2487-2488, 2489-2490, 2491-2492, 2493-2494, 2495-2496, 2497-2498, 2499-2500, 2501-2502, 2503-2504, 2505-2506, 2507-2508, 2509-2510, 2511-2512, 2513-2514, 2515-2516, 2517-2518, 2519-2520, 2521-2522, 2523-2524, 2525-2526, 2527-2528, 2529-2530, 2531-2532, 2533-2534, 2535-2536, 2537-2538, 2539-2540, 2541-2542, 2543-2544, 2545-2546, 2547-2548, 2549-2550, 2551-2552, 2553-2554, 2555-2556, 2557-2558, 2559-2560, 2561-2562, 2563-2564, 2565-2566, 2567-2568, 2569-2570, 2571-2572, 2573-2574, 2575-2576, 2577-2578, 2579-2580, 2581-2582, 2583-2584, 2585-2586, 2587-2588, 2589-2590, 2591-2592, 2593-2594, 2595-2596, 2597-2598, 2599-2600, 2601-2602, 2603-2604, 2605-2606, 2607-2608, 2609-2610, 2611-2612, 2613-2614, 2615-2616, 2617-2618, 2619-2620, 2621-2622, 2623-2624, 2625-2626, 2627-2628, 2629-2630, 2631-2632, 2633-2634, 2635-2636, 2637-2638, 2639-2640, 2641-2642, 2643-2644, 2645-2646, 2647-2648, 2649-2650, 2651-2652, 2653-2654, 2655-2656, 2657-2658, 2659-2660, 2661-2662, 2663-2664, 2665-2666, 2667-2668, 2669-2670, 2671-2672, 2673-2674, 2675-2676, 2677-2678, 2679-2680, 2681-2682, 2683-2684, 2685-2686, 2687-2688, 2689-2690, 2691-2692, 2693-2694, 2695-2696, 2697-2698, 2699-2700, 2701-2702, 2703-2704, 2705-2706, 2707-2708, 2709-2710, 2711-2712, 2713-2714, 2715-2716, 2717-2718, 2719-2720,



CARE FOR LIGHTS AND SIGHTS

Check out according to the particular sight and other equipment you have. (M100 uses the M11 sightpost or M170 uses the M14 sightpost.) Flares, instrument and handlanes **FO**.

INSTRUMENT LIGHTS—All parts **FO**, wires not exposed, lamp bracket not burned, life limit assembly clean. Wipe the lens works. Metal inside case not corroded.



There should have been no instrument light or strong post light when you close 'em. If anything's broken or the battery's the biggest cause of battery was corroded — and it was gey from the inspection.)

M11 FLUORESCENCE BOARD—All parts close good, activate scope, and scale read **FO**. Clean and dry. Final post lighty about 1000. Clean plastic parts of board with optical lens cleaning compound—Elin 700-100-1111 to 1 qt.—wax with gasoline, lighter fluid, dry cleaning solvent, alcohol, acetone, etc.) let gum eraser or rubbing cloth use by hand. Use only a sharp, soft #1 or #2 pencil for shading. Never use grease pencil, ball point pen, map pen or anything sharp.



M100 CHAMPING FACE—Metal wing fasteners **FO**, no holes or repair case, stitching not torn. It's kept from bending the board, breaks the case gently-like and don't close anything on top of it. TM 9-120-204-25 Out 625 w/Ch 2 (New 42) present in pouch of case.



FLUOR TELESCOPE MOUNT — (Focusing **Pa.** rubber not torn. Support can get you a new one — FOR 240.00-100.1) Three-position index lens not painted over. Optical glass absolutely unscratched. Telescope moves freely through 180 degrees of arc. Lamp bracket holder compatible with dual cover, screws and chain. Threads on both dual cover and lamp bracket holder not burned or stripped. Prior cover not loose or painted over. (Never remove this cover.)

TELESCOPE MOUNT MOUNT — (Upper and lower) — Telescope locking clamp complete with retaining washers on both ends of both sides. (The locking clamp is more than anything else on the whole that's important to get your hands. Check it often because the retaining washers tend to get lost. This lets the clamp slip out.) Both front and rear parts of upper-right **Pa.** Manufacturer angle of sight lens tube. freely and steadily as depresses the telescope smoothly.



THE LIGHT PROJECTOR MOUNT IS A PROTECTIVE MOUNT AND SHOULD BE IN PLACE WHEN THROUGH THE LIGHT PROJECTOR IS NOT USED WITH THE TELESCOPE.

(Note: Neither coarse nor micrometer angle of sight scales are used with the 4.2 or 10.444 meters.) Light projector not covered in place, cover, chain and screws **Pa.** The lamp is not used with the meters so it won't matter if it's missing or burned out. Run angle of sight lens as far as it will go in either direction and look for rust in the area uncovered.



TELESCOPE ADAPTER—(MIL or NMA)

—Spacer holds telescope above its position, screw wings set level or broken. See right **Pg.** Adapter scale and index screw inoperative. Defective micrometer scale and index readable, scale turns with knob or (for adjustment) when center of knob is depressed. Same style **Pg.** not painted over. Crest level **Pg.** screw not broken in place.



TELESCOPE
STRONG

WING

11 INCH TELESCOPE—(MIL, NMA, or NMA-2)—Optical **Pg.** rubber not torn. If you need a new one, ask your support to get it for you with GIN 2-10-3-10 (2-10-3-10) tubes from left, right, and straight up position not painted over. Optical glass not dirty, scratched or fogged. Telescope eyepiece from 100 degrees of arc. Field assembly does not indicate barrel.

4.3-IN ADAPTER NMA-1 ADAPTER

TOP SIDE—Paint without rust or bare spots. Painting of top surface permitted. Carrying handles **Pg.** bearing surface that makes contact with rubber stem, not painted, rusted, scratched or burned. Covered with light coat of NMA. (The NMA cap NMA—see all light pressure-related bolts open, not closed with hexagonal head. Will show, without rust or wear. Circular groove for rubber lock slide not bent, filed, without or polished.



NMA-1 ADAPTER
NMA-1 ADAPTER

NMA-1 ADAPTER
NMA-1 ADAPTER



INTERIOR RIBS—All ribs, **FR**, be broken or loose with in 5 hexaplate ribs. 5 support ribs under lateral ribs. Ribs and bands secure and buried. Plugging **FR**. (Loosen it in an emergency to break the vacuum between the hexaplate and the splator but then screw it back in again.)



ROCKON ACQUINT

INTERIOR MODELS—A cast magnesium model **FR** (FRAGILE) and a steel model **FR** (FRAGILE). Note the steel model you often have to move the bridge about 45 degrees left or right before it seats completely. Handles of magnesium model will bend if too much force is used in lowering steel cylinder with barrel's shoe. Check these points on the model you have. . . .

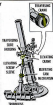


FRONT SURFACE—Handles and base, broken, or pulled out at the roots. Bridge trunnion coated lightly, lubed, and painted, buried or nicked. Expansion pin-out frames, malfunctioned, nicked or painted. Bridge bearing surface lightly lubed, and nicked or buried. All surfaces where there is no metal-to-metal contact covered with paint without streaks, bubbles, scratches or film spots.



TRIGGER CLAMP

Triggering not bent, polished or burned, lightly oiled. All 3 are an obvious consideration **PS**. Triggering can not freeze, hole is built high and low situated automatically. If it won't lock automatically, you can push inspection if you can hold it manually. If it won't open lock manually, tell your support! Triggering some shows not bent, rusted, painted or burned, lightly oiled, cases and towers evenly without bending or slipping. All parts of track automatically **PS**. Barrel and counter-rotated springs not worn out. Their standard straight open up to as it will guard their release. If springs are OK the standard will snap back into its previous position. Triggering mechanism wheel, crank and crank handle **PS**. Crank will stay normally where it is put in either the operating or stowed position. Not more than 1/4 turn free play in triggering mechanism wheel. Trigger operates smoothly without binding or slipping through entire range of travel. Triggering slide housing does not turn in a circular motion when it is moved from side to side. Slide housing not painted, bent or burned, lightly oiled. Triggering slide body lightly oiled, not bent, painted or burned.



BARREL MECHANISM

WARNING — Triggering placed broken or cracked. (Check carefully because a broken trigger pin could hit the barrel pinpoint of the trigger socket during firing which would be very dangerous.) Triggering pin and rounded bottom of slide cap not painted, lightly oiled, smooth, not burned. Slide cap tight, no gas escapes during firing. (Check edges of cap and hole. There should be no sign of powder burns.) Check counter springs OK? (To test, push trigger down as far as you can and let go of it. The barrel should snap back into battery smoothly and instantly. If it takes too long get your support to put on a new pair of shocks. Barrel locking pin **PS**. Barrel lock moves latch smoothly from locked to unlatched position and latch stays where it is put.



DO NOT TRY TO
USE THE CLAMP—
IT WILL DAMAGE THE
MOUNT!



All mauling surfaces of mortar joints painted without roof, spalls, scratches or blisters. Blemish surfaces and painted, smooth, roof free and lightly blued. Right mortar joints (scrubbed) made for frames, false, freely and more right work; smooth and evenly without bleeding or staining. Essential not baked or burned lightly used. Areas with gear assembly not baked or painted over.

MAINT. — Not demolition called round. Clean and lightly blued without powder coating or oil painted in the bottom of barrel. Fly 1/4 in long or wide or as much as 1/16 inch per 100 but you must have barrel if they're bigger than that. If they're any doubt, get your support to look it over. Your support gets 4.2 hours under F20 10-100-1000.



CRAP ON DOWN HERE



That old wrap with pipe wrench, F20 1120-100-1000, is the best comparison your M100 face wrench, F20 1011-700-1100, ever had for help in changing faces on M100M rounds. But some serious type maintenance often forgets to follow the A-B-C steps in Fig 43, Ch 4 (just 43) in TM 9-2000 (Chap 53).

For example, if you want to wrap the M100 variable time spacing—how for the point detonating paper guide—delay face on some of your M100 high explosive rounds—your first move is to check up right on the round itself with this pipe wrench. That way you'll be less tempted to violate the safety rule that says don't hammer on the face wrench to loosen the face from the round.

The pipe wrench is part of your mortar's basic tools.



CHIPPED TIP?

The self-respecting cowboy would want to have a smooth-bored gunbarrel. Indeed M14 riflemen across the land are inspecting his weapon's firing pin for roughness.

Could happen, though, if an unnoticed sharp point on the firing pin's tip poked around the primer of a round firing head. The resulting blow-back through the rest of the cartridge case soon would make for one hot-under-the-belted situation.



That's why it's important to follow the organizational maintenance instructions in *Field* 3-3 of TM 3-3604-205-20 (May 67).

But the only positive way to spot all those tiny pits, chips or tears is through a magnifying glass ... such as the FM 4070-105-6-001 found on page 72 of 9C 4070-105-6 (Jan 68).

HIT IT ... THUMB IT

Bringing the sight sharply with the heel of your hand is another a hand on a sight way to check the tension on the M14's rear sight.

An easy, steady thumb pressure will do it ... after you click the sight all the way out, then lower it back two clicks.

If the sight gives, even the windage knob on coincidence with the windage bubble at your combination mark, just one click at a time ... until the sight holds against your thumb's pressure.

FM 21-8 shows you how on pages 38 and 39 ... and explains how in page 27.



M14 HINTS

FOR THE SECRETARY

THAT'S RIGHT

OVERHANGS ARE NO-GO

Don't Miss It.

It's 1 sight in supporting that the cut water in the M14 rifle's front sight is the windage correction?

CWS L.E.D.



Dear Mr. L.E.D.,

That's right, Sir. And there's a wrench (Key, section head) given to the front. From Repetition's Tool 8-2 for the maintenance man is adjusting the sight to the left.

Might mention, though, that any sight correction requiring the sight to work on the sight line means the weapon needs to visit 15 for inspection.

Half Shot



RECHECK THOSE .45 SPRINGS

You don't have to split hairs on any more to measure those exact springs on your .45-cal pistols. Measure between 7" and 7 1/2" is "go" ... something



in Ch 4 of the 9C, TM 3-3604-241-12 (May 68).

The same change points out that a missing device on the recoil spring plug does not make the weapon unserviceable.

In general, consider the weapon unserviceable so long as the spring's not too close outside to wear so much more in way of the rifle. Check the TM change your, will for the details.

YOUR OIL MAY BE SLEEPING

You'd never suspect it, but that P-10 oil sitting inside your Hawk's AMV M50A-5 PCP engine pulsed may be keeping you downed for your country's JC status.

It's not the oil's fault... it's the P-10 lubrication called for in the lubrication chart on page 4-5, Fig. 4-3, in TM 9-1450-504-11 (May 68). The P-10's low viscosity makes it thin enough to seep past the seal.

Until an improved engine pulsed design retires the problem, you might want to drain and flush the P-10—and replace it with Lubricating Oil, Gear, Petroleum Base, MIL-L-6800-B, Grade 32, PFM 9-16-123-13 (it will supply you a legal one).

This is just a fix for anyone with this problem. If you need to replace the



lubr. for sure to use some Force TF to flush that P-10 out of there from the pulsed. (It can enter a 60-ft-thick of the block under PFM 9-16-123-13, M50C-50C-22A or equal. It's listed under Item 260, page 45, TM 9-6925-100-100-1 (Sep 67).

SOME BURN SPOTS OK



See an air bubble in the CRT cover is something else. That means you've got a weak spot in the glass. Trade value.

Burn spots on the glass indicator outside top valve inside your Hawk, AMV/TPQ-11 direction indicator and battery-powered control, don't always mean that life's no good. Depends where it's located.

It's OK if the burned area's less than 2 KM from the CRT's center... or beyond the 5 KM limit, but less than 1/4" in diam. Anything larger is no good—except for clearance of other training aids.

How easy to minimize burning problems is no follow the de-energizing steps in Table 2-9 of TM 9-1450-504-123-1 (Jul 67) for the BUC... and in Table 3 of TM 9-1450-504-123-1 (Jul 68) for the direction indicator.

HAWK HINTS



The pulsed suspension combination is a Hawk who runs in the air. And don't think your XM 104 E2 and E3 leader-transports don't feel it, too.

Your leader's suspension system starts flexing for take-off, so they the vibration shock of run normally in flexing the plugs in the intake-hull unit, bearing assemblies. One or 2 attempts to break the plugs from results too off in the pulsed when they have to be drilled out.

The solution is to substitute a brass flex head plug... PFM 9-16-123-123-1... which will not wear and can be removed with a socket wrench.

(Remember, the take-off should be at the shock plug level so each wheel set way and up to the level of the plug hole in the hull side for the road wheel bearings.



SEE 1000 100-1

Some birds can also cause trouble in the suspension system. Wear marks and displacement between the track pins and bolts are good visual clues. Or you can try the track bolts sliding over the side-the track bolt to see if you get any light from the wedge area holding down.

Replace the worn bolt hole or re-center as required.

You might also check for loose bolts in the lead drive (Lapins). (Torque 'em to 1-10-120 ft-lb.





THROW IN YOUR PCV

Puh-LEEZE

CLEAN VALVE!



NO MORE! TRY TO PUT YOUR FINGER ON THE PCV VALVE ON THE SIDE OF THE TRUCK. FINGERSTACHE!



LET'S GET TO THE VALVE. NOW. THEN IT'S!



Yes, Mr. Troublemaker—quick, now—can you put your finger on your vehicle's PCV valve? (It might be called a Dandelion valve—or steering valve—or ventilation control valve—or ventilation regulator.)

If you've got a gasoline engine in your vehicle, you've probably got PCV—or positive crankcase ventilation. You'll find that PCV in all Army tactical wheeled vehicles that have gasoline engines. And it's in most gasoline-engines, commercial-design vehicles built in the past few years.

Your engine's PCV is controlled by a valve, and it lets gases with only one or two simple parts inside (depending on whether you've got the spring-loaded poppet or the vented slide-valve type).

A dirty PCV valve with even all kinds of trouble in your engine. Folksies, Mr. Troublemaker, can you begin to find the cause of



It's a good bet you've got a bad PCV valve. Better to check cleaning or you make new one.

Scenes or later, your PCV valve is bound to get fouled with small stuff from your crankcase. Your valve controls the amount of fumes, water vapor and other junk allowed into the PCV system. This stuff is sucked into your intake manifold and burned along with the fresh-air mixture that comes from engine. That's "positive crankcase ventilation"—you've got the same thing on your mind too! If it's a fairly late model.

Check PCV: your PCV valve lets too much pressure get up through it like a plug. This opens the fuel-air mixture fed to your engine.

Check PCV: your PCV valve lets too much water vapor and moisture build up in your carburetor, clogging fueling up. This leads to stalling parts. And wet water starts burning and other polluted parts, this way. It's not good yet.

It's up to you to keep your PCV valve operating from 'a' step. Your vehicle's (DO NOT call this cleaning your PCV valve as every 3 months. (Commercial vehicle manuals usually specify 6,000 miles.)

But this mechanical cleaning may not be enough — especially if your vehicle has to drive a lot of hilly or steep-and-go operations. And your PCV valve should be checked more often in cold weather operations.

If you suspect your PCV valve is causing rougher trouble, here's a quick 'a' step way to see if it's working? Here it's a good one.

Take the hose off the inlet end of the valve. Then, with your engine running at idle speed, lay your finger lightly over the open end of the valve. You should feel suction. And you should notice a difference in the sound of your engine. If you don't, your PCV valve is probably plugged.

Correct



Is good, does PCV valve should make a clicking sound when you check it. This means the plunger is free. But also should make a off noise in the inlet end of the valve and push the plunger in so it will go all the way towards the carburetor.



Maybe you need a new PCV valve, but try cleaning your old one before you think it out.

Some PCV valves come apart for cleaning. You use dry-cleaning solvent or mineral spirits just to clean. Carburetor cleaner is good, too. And you may have to do a little brushing if the wall is rusted. Be careful, though, not to stretch or mangle the spring used in the spring-loaded type valve.

If your valve does not come apart for cleaning, just let 'er work in the clean. Then twist it around to push out the junk and give it a shot of compressed air in each end. Careful . . . use low pressure. Wear goggles for safety.



In a pinch, some valves of this type can be taken apart for cleaning. This is illustrated in the later end of the video. After the seal is up with a small hammer or stick of wood to drive the



sealing ring out of the valve end, then the plunger and spring will come out. After you've 'puffed' the valve back together, after cleaning, make sure the plunger and spring are positioned right then a stick of wood to pop the springing back in — very carefully.

While you're cleaning your PCV valves, it's also a good idea to make sure the connecting hoses are valves are clean inside. Check, too, for leaks — the breather or loose connections.



MECHANICAL TIPS...

FROZEN FUEL?



"MY FUEL LINE
FROZE. FUEL
DIDN'T
FILL. DON'T
FROZE!"



"NO — BUT
THE WATER
IN YOUR FUEL
TANK... AND
DIE!"

Oops, that's not frozen fuel blocking up the fuel system in your modified engine truck. It's frozen water — too!

That water you forget to drain from your fuel filter has frozen solid. Fuel can't get through. You've gotta' see place could you get those filters changed out. You'll have to put your truck in a warm place for a while. Or, if you're in a hurry, use hot water to thaw your filter. Fortunately, don't go out! a truck or show-out a fuel filter!

Now you've learned a lesson. It's more important to drain your fuel filter every day in cold weather than at any other time.

And don't forget to add alcohol to your fuel, per page 44. TM 9-207 w/Ch 1 (Feb 43). Diesel fuel systems get the alcohol treatment now, too, per USANTACOM Mag 3-2003 (Jan 68).

FIRE EXTINGUISHER SETUP

Dear Mailman,

AM 303-41 (page 47) tells you to put fire extinguishers in marked racks under car seats. Well, that's not very helpful. But every 1976 has a seat where the you have one bottle placed AM 8, 9, 9.



Dear Fireman R. F. C.

You must be referring to the 1 1/2-, 5- and 10-lb. racks. The spot to mount fire extinguishers on '66 is the lower right-hand firewall inside the cab — that's if your CO gives the go-ahead.

You'll find four knockout plugs on the firewall for an "old" extinguisher bracket, but with the lower standard extinguisher, FM 423-0-011-0011, you can use only 2 holes, maybe. If you run into trouble, man fresh. But move to the next item.

Here's the spot for the 1 1/2-, 5- and 10-lb. racks . . . and the hardware you need.

1 Screw, machine, 5/16", FM 423-0-011-0011
1/2" (10-1074-00)

1 Washer, 1/2", FM 423-0-011-0011
10-1074-00

1 Nut, plain, 1/2" (10-1074-00) (10-1074-00)



... BUT, LOOK FOR EXTINGUISHERS ON 1976.



On other 1 1/2-, 5/4- and 1 1/4-lb. racks, you can get all the drops you need from the vehicle TM's.

TEED OFF—OR UP?

You wrap right with a modified engine, and you'll make long drives without a hitch. If you don't, you'll blow your stack soon enough.

A modified truck can't stand a steady on any fuel return riding. FSM 4728-155-4434 or see assembly, FSM 4730-226-1555.

A good will show up that is a new replacement.

Like in gold, you measuring on a good approach. Then, study your situation.

DO NOT PUMP UP THE... — Don't if you
pump up your fuel tank and engine,
especially in cold weather when the plastic
taking gets brittle.



DO NOT IN THE... — Don't use the gas,
the low the fuel down and the oil in
around the tubes. In case you don't try the
engine motor with shavings.



DO NOT IN THE... — Don't pump up the
engine, especially in cold weather when the plastic
taking gets brittle.



DO NOT IN THE... — Don't pump up the
engine, especially in cold weather when the plastic
taking gets brittle.



This FSM set-up is based on giving you smooth riding.



The big reason for a person going to school is education. Education gives you the knowledge and skills you need to succeed in life. It's not just about getting a degree, it's about learning how to think, how to solve problems, and how to communicate. Education is the key to a better future.

EDUCATION MATTERS
 The first step is to choose a field of study. There are many options, from science to arts, from business to education. Each field has its own challenges and rewards. Once you've chosen a field, you need to find a good school. Look for a school that has a strong reputation in your field of interest. Make sure the faculty is experienced and knowledgeable. Also, consider the location and the cost of the school. Education is an investment, so make sure you're getting the best value for your money. After you've chosen a school, it's time to start studying. Set a schedule, stay organized, and don't procrastinate. Remember, education is a journey, not a destination. Keep learning, keep growing, and you'll reach your goals.

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Shedden

Some people who should know better have been calling the M79 Shedden a "tank." The Shedden crewmen and maintenance guys know it's an Armored Reconnaissance/Airborne Assault Vehicle . . . Shedden for short. But "tank" is tank. Right?

Color M79 Drone

Back-up point jobs on M79 provide heavier plastic shells should be done with the 10-oz mortar can you get under FMV NEED-140-0002. It's Brown, Blk, ORG, and it's available from 45 Army Military Equipment Command by using MEC 412.

**JOE'S
DOPE**

**LEAD-
ACID
ESTERIES**



BAKED BROWN
— FRESH ROAST!
AND IN BAKED DOCKTONE!
DO THE BAKED ME!



THE
MORNING
DAVID!



WHEN... HE
THE OFF... WITH
THEY AND OUT
THEY... GARY!

GARY... THE
BATTERING
JOURNALS
AND THE...
GARY!



YOU HEAR
THE CASES
ON THE...
WITH...
...ON...
...ON...

A...
...AND
...AND



HE...
...AND...
...AND...
...AND...
...AND...
...AND...



NOT...
...AND...
...AND...
...AND...
...AND...
...AND...



BEFORE OPERATIONS



STAND
FULLER COPS
AND CHECK
ALL CORNERS
OF THE
BATHROOM
TO BEHOLD THE
PLANS...



YOU ARE READY
TO GO TO THE
ONE PLACE
IN CANTON
NOT TO
BURN
OR FIGHT
AND YOUR
SUBJECT IS



WELL, THERE
ARE CONSIDERATIONS
TO MAKE FIRST
THEY'RE TIGHT



GET AND THEN GO
WITH THE TIGHT
AND TIGHT



THESE SLAM WITH
THESE AND THEN ONLY

THESE CANNOT
TIGHTEN
THEY'RE TIGHTEN
DO NOT IN THE
CANTON. THE
TIGHTEN AND
OF THE
NOT



THEY'RE IN THE MIDDLE
TO BEHOLD SLAM AND
(AND) TIGHTEN

IF THERE'S AN SPAC
AT THE OPEN END OF
A TIGHT SLAM
GET A TIGHT SLAM



LOOSE IN THE SUBJECT ...
THEY'RE THE MIDDLE...



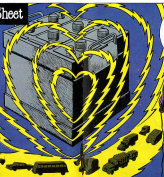
BUT, FIVE OF
ON TIGHTEN CANTON
THE TIGHTEN

THEY'RE
A TIGHTEN
TIGHTEN





Dope Sheet



The battery is the heart of it all! Powers equipment — the larger and the smaller! But the operator must use it's PWer constantly... And it's kept at the ready — on call!



WE HAVE THE WORLD'S BEST EQUIPMENT...*Take care of it*

IF YOU WANT TO DISPLAY THIS CARTRIDGE ON YOUR BULLETIN BOARD, OPEN CLAMP, LIFT IT OUT AND PIN IT UP.

DURING OPERATIONS

KEEP YOUR EYE ON THE METER TOP—ON THE BATTERY CHARGING INDICATOR. IT TELL'S YOU HOW BATTERY-POWERED, BUT NOT FULL.

HIGH READINGS ON YOUR ANMETER OR ONE-GEN INDICATOR ARE SIGNS OF OVER-CHARGING. THIS CAN KILL YOUR BATTERY. ANOTHER SIGN OF OVERCHARGING IS A HEAVY DEMAND FROM NATURE. BUT DON'T HAVE YOUR BATTERY CHARGE FROM NATURE. RECHARGE.

ANMETER

USING THE
LEFT GEN
METER OF
CHARGE



IF BATTERY
LOW &
HIGH RATE
OF CHARGE

USE WITH
A BATTERY
IT WOULD
USE A BATTERY



IF IT
WOULD
WARRANT
A HIGH
RATE OF
CHARGE
BATTERY
IT'S

BAT-GEN INDICATOR (2-TYPE)



4 CHARGE RINGS

WILL
SHOW
IF THE
BATTERY
IS LOW



2 CHARGE RINGS

BUT... IF IT SHOWS THIS
HIGH BATTERY CHARGING OPERATION,
REPORT IT!





ALL RIGHTS

NO MORE
DUNKING

If you've just submerged a Cummins (L-10) carburetor in a pail of gasoline to condition the fuel diaphragms—what next do you do?

There, dunking will return the fuel diaphragms to a healthy condition so that you can get a stable idle adjustment after a carburetor change.

The dunking will also wash the vinyl coating from the air diaphragms which will cause them to dry out. Then the carburetor assembly is thrown out-of-vehicle and the diaphragms give it just before it starts.

THE SOLUTION

Put on the new carburetor. Then wash only the fuel diaphragms by immer-



REMOVE
THE
CARB
BODY—
THEN
SOAK
DIAPHRAGM

ging the diaphragms and return controls.

The new 2-in carburetor, working dead in just 1-1/2 of 10-1-10 May 65, is THE 10-1118-201-28.

GET HIGH TEMP TYPE

There's no need for you RayCote's seals to make your pump leaking for the high-temp packing ring called for in para 6.30 of TM 11-2750-201-20 1 Apr 65. The hydraulic models like element give Garing, M888775-111, 1000 1000-1170-1115.

HUEY

PM ROUND-UP



ROSEY THE BOW

You're going to get normal wear on bird parts and the cargo doors are an exception. It's PM to the rescue.

When the slider latch works in a place where you're close to get mechanical contact between the slider and the door track it's time for a switch.

Unlock the cargo door by going all the way with the latch handle. The latch pins have to be out of the cargo rails so they'll wear a groove in the door frame.

Remove the door steps in the door tracks at the ab end of the fuselage.



When the door is to expose the slider. The bottom part of the lower ribs on the lower track and wear—the top part just acts as a guide and doesn't wear.

When you're that the current latch is in good condition, wear the slider 180 degrees so you wear the other latch.

Move the door forward, put the door steps back and you've saved yourself a year's replacement.



BY HUEY AND HUEY

Looking that scratched plywood-on-drive a place to distraction. Flying themselves to answering them to the ground rails for the best visibility a place can get, but some bird parts get loose up.

In, whenever you want to adjust the pilot's door to the door never needs for the handle without then lowering the window step... it's a whole new thing to do!



Using screws on the window handle with the caps locked can even break the handle off the window.



For other PM tips on how to keep bird transparent plastics from getting scratched be sure you follow the cleaning info in Chap 3 of THE SYMBIONE 3 (2nd ed.).

SAVE THE AIRLINE

During the AM/ABC-30 (GME) operation from wear and damage is "a must". First secure the main cover by running the window straps from the air-vent and then around the wings. Tie the straps around the tail boom.



DRUG DRAG BRACE ARM



DRUG DRAG
BRACE ARM



Drug' loose when you're working up a sweat on your bird. This goes double on a main cover brace-change.

Follow the prop in Chap 3 of the Heavy organizational maintenance path. In addition, before you lower the blade into the prop, make sure you bring the drag brace out of the way so you don't upset the new blade.

'Tis mighty embarrassing if you have to install a new blade on the repair shop.

To guard against chains chafing just a strip of anti-chafe tape, FUM 140, FUM 44 55-513-8954 (1 roll) on the forward upper edge of the casing where the drive shaft cover makes contact with the casing. That'll do the trick.



DOX OUT LARS

When you pull your FRI, look for grease leakage because it can mean some part is breaking up from friction and is about to crumble.

A short rail-caster drive-shaft-coupling seal, for example, can develop a coupling . . . no lubrication. When this happens the internal splines of the female coupling half will be stripped by the external splines of the male half, in short order . . . like in a matter of minutes.

No, if you make a grease leak check it out, pronto.



FORM TO GET GRAY



Seeing that your bird gets an adequate dose of clean grease makes more effort than avoiding oil seepage. The job has to be done right, which means following the labor chain to the letter.

Take the full outer hub and blade grip bearings. If you're operating in a dust level, dirt is going to accumulate in the grease. Dirty grease will scratch bearings and on the wings for an entire season.

Get rid of the gritty stuff by taking the bearings every 10 hours—or more often if needed.

To do a thorough job, disassemble the pitch link or use blade grip.

Push the bearing with grease. Rotate the grip several times in both directions to make sure you've purged all the dirty stuff.



Pray again and wipe off the excess grease.

Reconnect the pinch bolt.

Disconnect the pinch bolt on the other blade and work with the grease gun in the same manner as on the first bearing.

Reconnect the pinch bolt—you've done it up before.

Yikes, maintaining your new charge is a challenge. Stick by the plan and pull your PSI regularly and you'll be a veteran crew chief in short order.



WHAT'S MY CONDITION?

I SUGGEST A DRIVE SHAFT ALIGNMENT CHECK!



Dear Woody,

I can see where a heavy 3000-3500 cc. car like your alignment check is needed for most of working with me, working—or is that? But the shift is not often. But why does your 3.0/3.0 of the 3.0 1.00-1.00-00 they still call for an alignment check after a major repair or replacement of a component in the center (perhaps, not beam and plate support)?

DAVID L.

Dear Specialist P.J.,

You make the inspection, depending on the condition of your first.

An alignment check is not needed on routine maintenance, such as engine change—if the engine mount and drive shafts are not changed.

But sometimes bad parts get here a little and you have to follow the steps in the special inspection section of the job.

A bad bearing, engine over-speed or over-torque can all conditions that may cause a major component change ... and a drive shaft alignment check.

“NO CHAFING, SEE?”



You eagle hunter media hound, here's a look at the Link's primer line, where it's clamped to a bracket on the rail system.

Maybe the clearance between the line and control volume rod is not what is ought to be?

If there's squint, a chafed line could rupture and spray fuel on the engine when the primer is used . . . what a creative development!

No, have your buddy move the control volume they fall around while you open the clearance to the control rod moves past the primer line.

Re-position the line if there's a possibility it may be chafed by the rod.



NO LACK OF SLACK



The next time you open up the engine wiring on your Chinook (CH-47C) focus on the #1 control wiring harness.

Make sure if you have loose-wrap slack in the connector area you'll get a chafed line which, in time, can open the approach.

So . . . reduce the slack at the connector and increase the slack between the upstream clamping.

While you're at it, look at loose-wrap wrap, P/N 000000-4, P/N 0000-000-0400.

Put a piece of wrap on the harness, between the upstream connector and the first bracket point.

That'll stop the harness chafing.

CHECK FOR VIBRATION!



Don't Worry,

it's all engine vibration check to make after removing a major rotating part, such as the tail-end, and if you suspect excessive engine vibration.

But, my friends and I have been going 'round and 'round as whether an engine vibration check is pulled after a heavy engine change.

Is any one else's head spinning? What's right, friends?

OWEN L.L.

Dear Mr. R.L.R.,

It's true that the engine post installation inspection on page 3-18 of TM 11-1520-208-20 (7 May 69) does not include an engine vibration check.

However, the guide is being rewritten and the inspection to make sure the engine was put in right. A misbed engine will give you vibration.

TM 11-1520-208-20 (7 May 69) para 3-63 and TM 11-2000-208-20 (1 Oct Jan 69) para 3B, both call for the vibration test after an engine change.

John

NO SQUATTERS, PLEASE!

To keep your baby from getting middle-age spread, forget any improper meals to the undercarriage.

Some old-time types have used a single thru bolt on the Huey (UH-1) landing gear strut cross tubes instead of 2 bolts and nut plates.

Course, a single bolt won't carry the big load the 2 bolts will carry. . . could make a squatter out of your bird.

Over-tightening of a thru bolt can also buckle and/or break the cross tube and sideline your bird from the forest.

Keep your baby slim and trim. When you change a cross tube or a thru bolt be sure you use the hardware listed in the field parts guide.



COMMUNICATIONS

STAY AHEAD OF THE HEDS BYING THIS WAY!



IN YOUR OWN DEFENSE... FLY RIGHT... OH-15 ACTION



WITH NO.1 ICE GEAR



DEFENSIBLE...
PERFECT... CLASH AS
A MESSAGING SYSTEM...
HAWK... YOU'VE GOT TO
DANGER!



It's our main job your identity
CHM1 vehicle inspection at his own
game!

You get the chance, right now.

Following are required definitions,
downwindings and suggested improve-
ments CHM1 team members find on the
OH-15 (S, G, H, S and T) and vehicle
equipment. Connect 'em and you'll see
why cheating your CHM1 team, but
you give your team some Me. I type
preventive maintenance.

The build type team are the main
vehicles and would give you a checklist
on a CHM1. Others would run you a
downwindings or a suggested improve-
ment.

So, crew chiefs, check out the
vehicle requirements and improve
your wings.

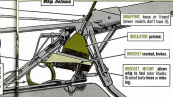
WING cracked, broken,
tapped or weakened, loose
to frame (if so, replace the
wing)

COUPLER mounting screws
loose.



Connect **COCK** cable not securely taped
and string tied (taped to frame) with 2
wraps of electrical tape and string tied
with metal lines or nylon, wrapping 1/4
in string ends. Use a close hitch and a
square knot.

Wing Assembly



WING base or frame
never holds don't lose it.

WING painted.

WING cracked, broken.

WING mount allows
wing to fold into blocks.
Bracket holds base or wing
ing.

(over) Whip Antenna



BASE SCREWS missing, broken, wrong size.



BASE NUT or SET SCREW loose (not captured with optical or locked).



"DROPPED ANTENNA!
NO NO NO - NO NO NO -
GOT TO A BEAST, MATEY!"

Air Radio Box

SCREEN clipped with debris, short springs broken. Broken or dirt in box.

CABLE CLAMP loose or missing. Insulator/transmitter mounted on shockmount.

GROUNDING BOLTS or CLAMPS loose.

GROUNDING NUTS not safely wired.

AIR FILTER dirty.



Forward Radio Box

CONNECTOR not safely wired.

CONNECTOR NUTS loose.

GROUNDING STRAP broken, missing, loose.

SHOCK MOUNT bent, with missing shock mount action or not being together, screws loose, missing, wrong size.



RADIO SLIDE FASTENERS broken, loose, missing. Cables wires not secured.

GROUNDING missing if used inside only.



R-1 MOUNT BOLTS and CABLE CONNECTIONS not satisfied.

BRUSH CAP broken, missing, loose.

FUSES Wrong (must be 15-amp, manual blow).

COMPONENT MOUNT BOLTS not satisfied, ground strap broken, missing, loose, should be made or has loose battery electrical connectors under box are not satisfied.



SYNCHRONIZER slide broken, not wired.



Instrument Panel

TUNING SHIFT misaligned (looks work above dial must align with white dot on right end of dial scale when stunk is rotated full counterclockwise), crank (ticks, does not turn) loose.



CONTROL HANDLE butterfly control broken, binds.



SWITCHES broken, loose wiring.

COMMUNICATION CABLE missing, incorrect, not visible.

PAINT MARKING on left. **TERMINAL** missing, not visible.

"HELLO, BLACKBIRD, YOU DID IT AGAIN!"



"I DON'T KNOW AND CAN'T TELL!"

DIMMER SWITCH binds, loose knob.



WIRING loose, rubber controls.



CIRCUIT BREAKER Wrong (SAL-ABC-40 and WPC-44 take 10-amp; WPC-41 takes 5).



Master Cords

CONNECTOR broken.

CLAMP SCREW loose; rubber insert missing.



"I CAN'T UNDERSTAND WHY THIS HEADSET DOESN'T PERFORM LIKE IT USED TO!"

WIRING missing.

CABLE frayed, cracked, broken.



Feeding Antenna

ANTENNA cracked, broken, frayed, arched, loose in ferrule, not all lines with lower section, not vertical, loose in ferrule.

WRAPPING loose or frayed feed on tower antenna.

GROUND WIRE missing, damp loose.

COUPLER painted, screws not adjusted, flinder head screws missing or not properly replaced with lock-washers under satellite screwheads.

COAX CABLES not taped and feed to flange (per whip case).

PIPE not double clamped, left loose, painted missing.

BASE BUSHING loose, missing, not sealed.



SW Antenna

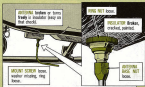
ANTENNA broken or loose freely in insulator (keep on that check).

PIPE NET loose.

INSULATOR broken, cracked, painted.

MOUNT SCREW loose, washer missing, ring loose.

ANTENNA LOCK NUT loose.



IS THAT CRYSTAL CLEAR?

THE
RECYCLING
THROW-
AWAY
MAYBE
TO
COME
ON!



BE SURE
THEY'RE NOT
BASIC
PHEAS.



Next time you're about to turn in your AMT/ABC-41 radio set to support the repair, give it a quick check to be sure you're not turning in some special frequency crystals.

Your set's basic issue items list calls for the following crystals: 245.2 MHz, 241.0, 245.0, 249.0, 257.0, 272.0, 274.0, 281.0, 344.0 and 348.0.

If you've got some frequencies other than those, hold onto 'em when you turn in your set . . . because the replacement you get is gonna have only the BIL crystals in it.

Naturally, that'll leave you scratching for the crystals you really need.

HEEDLESS HELMET HABIT

Go right down, Mac. Take that CVC helmet off and sit right down . . .

BEHOLD it, inside it, Mac—~~not ON it!~~

You could wrap the helmet over the explosion area, just by using it for a wraparound. You can even damage the outside explosion protection . . . or the occupant.

And the real deal is, even when Morgan's shell is wrapped over a concussion, it's not much good for anything but a hug.

So, any time you think about sitting on your CVC helmet, the best way to sit is to ~~Don't~~.

HEY-
I
GET OFF
MAN!



ONE COOL RT

Worktop! Before that, taking the side panels off your AM/FBC-12 radio receiver/transmitter won't help it keep cool!

Removing the RT-240 or RT-241 with the panels off will burn out the telephone bands.

The moral: keep the panels on. They have the blower air through the front and to the parts that need 'em ... including the transistors. The "panels on" tip applies even when you're troubleshooting the RT.

Next, if the blower stops, shut down the RT and send it off to your supplier.

A final "hot" note: Don't lay your equipment without its various heat conductors or during extended, hot let-it-thing is up without a final run down on your RMT meter or the VOM PA wire.

BAG THAT BATTERY

In the package or box, dry batteries like those for portable radio sets should keep their moisture on until they're used ... and even longer.

For example, batteries like the BA-350/PBC-15 and BA-430/PBC-15 are sealed with plastic moisture-barriers (that's a bag, man) and then sealed in cardboard boxes. Like the same sets, the bag keeps out moisture and should stay on the battery until it's ready for use.

Batteries like the BA-100/L1, for the AM/PBT-1 signal radio transmitters, are individually sealed, and there's enough room in the battery case for a liner ... you can keep the plastic bag on when you store the battery home. The plastic will puncture the plastic.

UNDER ANY CIRCUMSTANCES, KEEP THE BATTERY SEALED IN ITS PLASTIC BAG. THE POWER BEING BUILT UP INSIDE IT!



COMBAT
SURVIVAL
YOUR MIND

WEDGING
ON YOUR
SURFACES...

SECRETS OF SUCCESS

A "WEDGED" or "WEDGED" BLADE
ROCK FLOW,
A "WEDGED" BLADE
WOULD BE CONTACT
WITH THE ROCK AND
ON "WEDGED"
ON, MORE ABLA
"WEDGED" WILL YOU
"WEDGED" HAVE NO
TYPES.



SECRET
1

**NO SUBSTITUTE FOR
A SHARP BLADE**



Stick up the heavy pneumatic grader to 50 or 100 lbs. worth of air and pressure and get with it. Go to near 26" on the sliding edge as you can. Check your angle and thickness with a template like this:



Grind off both on the bottom after you shape the top. Whichever side you're working on, keep a solid support under the blade. When griddles when grinding. When you get done, the underside must be flat. A curve up to the point is really the 12.

SECRET
2

**KEEP BLADE CLOSE
TO GROUND**

Like you'd keep your head down in a fire fight, ride that blade down low when you work. But how low?

Rig so the slinger just floats on the ground, but doesn't dig in. Carry that right-side trailing edge 1 to 6 inches off the ground, no more. Change that only when (1) you raise the blade to go over from work on a back up (2) when you have to slip on a large area with the slinger and "wavy" or (3) when you have to grab over large rocks.

That blade, it helps keep large areas off your head, because that's how to lay 'em ahead and to the right.



When you do have to grab — through a bull blade's hot fence — take it easy. Slowly slide the crank on the heated axle with the rings, then turn on power. Whamming a tire with speed on is about like putting a hot wire inside your belly pan — truck roller frames, ring gears, traction, and crankshafts smelt up. The secret is slipping away, not trying to take the whole crank off at once.

Better still, it helps keep you from running over big stumps. Most guys have had big stumps roll under 'em, take blade and wheels from up in the air — then drop headfirst right across the machine's gas guard.

SECRET

3

BEAT THE HEAT

Maintaining proper water level is simple. You just check it every 15 hours on your vehicle's tank. Every now and then, dump 'er all level.

Then you pick off leaves, sticks, grass, rocks and such on radiator faces and engine side screens.

Once every shift, blow out radiator fan faces and rear with compressed air. Clean behind the radiator guard screens, top and bottom.



CRANK
AND
WHEELS

KEEP ENGINE COOL



SECRET

4

WATCH YOUR GAGES



THESE
GAGES
TELL
YOU
IF
YOUR
TRUCK
IS
OVERHEATING

1. If you'll your transmission oil and radiator temperature gages close like — and
2. keep a watch on transmission oil pressure. If pressure drops and the heat gages
3. go up, the chances are you're operating in too high a gear.

You do shift to a lower gear right then, but you keep on with your gage-watching. If things don't slowly down right away, pick a spot where you can idle down and stop completely. Then find out what's cooking.

If you've been rolling a load in front of you, instead of shifting down, slightly right and left, bumping it. Literally shake your troubles off.



OVERHEATING?
STOP NOW!

DO YOUR HOUSEKEEPING

Lubricating oil, hydraulic oil, air, and fuel have to be clean, really clean.

You're the only one who can keep 'em so. Be clean, clean, clean.

Another place is the crankcase guard plate. It has to be free from rock, mud, and crud, or your oil will foul. If you can't wash it with water successfully, get support to drop it and scrape it clean.

If you've been in heavy clay, wash out with a hose between fuel filter and sprayer. Otherwise, hose can leak the day or brick.



SECRET
5

GUARD YOUR OWN



You got an air grinder of your own, or have had to build. Take care of it; don't let it get far away or out of reach. You may have to use it even oftenier than the mandatory ROP. You may have to grab even in rocky ground, if necessary.

You have a track-adjusting gear, get around — or on the main track if don't your own ROP. If you don't take care of track tension, the one else will.

TRY TEAMWORK



You may have heard that so much you're sick of it. But you can't beat it.

You need a thousand cleanable and more signals.

You club up with a couple other operators, or maybe more. One team does the hitting on all the club's rigs, another fetch, another team the cleanouts, and you gang up to sharpen up. Your maintenance heads run quarterback.

Then some's out pair of eyes will see each rig, and more small troubles found before they're big.

That's real PM.

WITH THE BEST MECHANIC IN THE ARMY, THERE'S NOTHING SHE CAN'T DO!—BUT FOR ONE...

MY GEAR?
NOTED ON WHEELS...
—OH, I SEE.

WENT IN THE BEST MARCH

FORGOTTEN A DOGGY'S HERE PLACE

ANYWAY, NOW YOU'VE ENJOINED?

There and there are always a dozen or so small propellers. Your 10 will be an all-terrain check or less every 5 hours. That'll give you a chance to make sure the oil level is up and to check the air filters.

THE FUEL THE AIR THE OIL



The time to change air filter comes, it's right when you see the red strip in your air-conditioner indicator... not a little later, or after lunch, or when you get back. Clean, when you have your engine up, when it's up there, and let your power quick-like.

WE GET ALL... COMPRESSORS NEED CARE

Agreed... mechanics keep the Army moving. Whether it's a tank or a truck, a car or a plane, a boat or a machine, a machine or a machine, a machine or a machine... the man with the wrench and the hammer is the one they all turn to—Pillars and pillars alike.

That's you, Knight of the Knobby Knobs. It's a busy business—

so much so that you might just overlook your own PM. It's easy to get so wrapped up in showing equipment back to men that you forget yourself and your own tools.

Like that air compressor in your shop, it's essential.

To tell the truth, compressors get neglected about as much as anything else you could name... like mechanics' personal cars.



KEEP THE TANK

You should let a CMR in a rough tank of work work you with a compressor on the tank—let you work's.

Most air whether it's a one-day or two-day, old tank, made from one-year old iron, or brand new, does what it's supposed to do. It's a common problem.

You can help yourself by being sure just what it is you have. Finding a pressure gauge on the right fit for any piece of equipment is a first step.

... THE ENGINE ...

But no way, you, people point people point for pump-like this, because here's how you get headaches:

COOLING FINS—Dirty, broken, foreign matter blocking off air.

WATERS—Sewer hoses in messes, handle broken, won't work, when or connections loose, frayed, split, plugs loose, broken.

COOLING CASE—Bolted loose, cover bent, back-ets damaged.

AIR CLEANER—Hoses loose, cracked, cover loose, dry-ate filter choked or blocked, gill covering pump bottom is all both.

FUEL SYSTEM—Filter clogged, fuel dirty, lines loose, dripping, crimped, carburetor dirty, lower parts missing.

That's just necessary, sure, but it'll give you an idea whether your engine is all right or the ground. If it is, all your engine, all this, you've got an idea how much and go with it.

If nothing's out of whack, no much there, though, you can go on to

... THE COMPRESSOR

That's your air-cleaning and, look at

AIR FILTERS—Like your engine air cleaner, must be fire-retarding. Look out for holes in the screen and mesh.

DRIVE BELT—Faded out, too loose or too tight (4 in. to 1 in. deflection is correct), is correctly pulleys out of line.

COOLING FINS—Hoses must be clean and healthy. If these are engine.

WATERS—Intercooler or aftercooler loose, crimped, cutting against belt guard or frame. Rust or corrosion from hoses, broken.

So far, so good? Then it's time for you to ...



You check engine oil.



You check suspension oil.



You see if the oil's hot ... you may be surprised. You won't have thinking all along that you had a safety, and you didn't ... or had you?



Another check you can take care of right there is your tank chain. If water's inside, let it out ... if the chain works. If it won't work, fix. Then head an eye to the square rope and pulley. A good rope in a healthy pulley, one with no grooves or cuts in the face or loose kinks is what you need.

Scan the chain, lower while you get out to start. Be sure it works smoothly, and open easily when you've pushed the main rope and got going.

There's when you see the man, your man. Listen for backfires, engine operation after warmup, sparks, rumbles.

Especially use if the driver's left rope is, shifting and cutting my output flow.



Check for fuel, air, and engine operation.



Now look at the person's rope. Before you check the oil, it should be hot ... or is it hot?



Close the relief valve, and see if the pressure gauge builds up like it should.

Get that done, and you're pretty well through with your running check. You're even taken care of many of your Q service inspection points.



WHEELS — Look out, pressure has (2) It is right for most of these right side look, just have working.



THE EXHAUSTION OF WHEELS — For heavy, and broken, damaged, missing (should not be mounted right on equipment, but kept checked).

WHEELS, TIRE — Working, not alone.

At this point, you wouldn't fear the salvage yard so . . . In fact, there's a bonus.

THE LIFTING

Keep in mind that these right wheel's meant to be substitutes for heavy engine-type compressors or pneumatic tools. For such big jobs, get an engine heavy-duty enough to put out lots of air without gasping. Those deep-compressors are great in the spots they're meant to fill — blowing dirt out of exhaust ports or filter elements, sliding up tires, removing plug elements, and so on. Just don't ask too much of 'em too fast.

NOT THE HEAVY REACHING?

HOW LONG CAN YOU STAY LAZY? THESE NEW AIR-CONDITION ENGINES NEED KNOW-HOW! SO, HERE'S A LINE TO HELP YOU WITH SOME ENGINES YOU MAY HAVE!

MODEL	ENGINE TM	COMPRESSOR TM
Elfrigg 3-111-1P	3-2881-228-14	3-4384-124-15
Basic 21P	3-2881-237-14	3-4384-128-15
Champion 1P-21L 1P-111-200-1	3-2881-238-14	3-4384-131-15
Champion 1P-222-1	3-2881-239-14	3-4384-140-15
Elfrigg 3-111-1P	3-2881-237-14	3-4384-128-15

Also real useful are the TM 3-2881-237 series and -239 series, and TM 3-2881-211-14 and 21P. Bear in mind, on RSC-labeled general units, engine numbers are our thing, and condenser numbers something else. You can't always be sure the engine you have on the condenser, or the compressor you get, matches the original item. You might get a Basic 1MP with a 1L engine, or a Champion 1P-211 with such power. Don't let that cheat you. With the new engine TM and the compressor TM, you have all the answers.

You should, in case of such mistakes, check your P.L. to be sure your mail covers the compressor and engine that you really use, not just the one you were supposed to get. It's okay to have parts that fit.

NEED INDEX OR PS?



Indices covering the following PS Magazines are available: 176-181, 183, 187, 188-193, 194-195. Only these PS Magazines are available: PS 182 thru 184, 186, and 188 thru this issue. Drop a line to Sgt. Hal Marx, PS Magazine, Fort Knox, Ky. 40325.



LISTER BAG FAUCET

No need to turn in that water-wasting bag, RSC 4014-304-0498, because of a leaky or broken faucet. You can order faucets, RSC 4118-377-0468, using RSC SRC.

SAVE THOSE HEATERS



Hold on! Before you turn in your immersion heater, FSN 4140-366-0000 or FSN 4140-419-0146, take another look at it. Maybe it still can be used.

You can operate those heaters with small holes or cracks in the partition or baffle and it's not considered a safety hazard.

But if it takes too much time to heat the water because of the holes in the baffle partition or the baffle, that's something else. Go ahead and turn 'em in for replacement.

TS 158-073-6 FSN 661 gives you the trouble-free.



YOUR DRINKING CAP

Here are a couple of checks for you on the special vacuum cap issued with the M14A1 solid protective mask.

The cap doesn't work on some of the early production plastic canisters (FSN 6605-000-5744). So first check your drinking cap system.

If the cap doesn't thread on very flat, you'll have to wrap your canister for one that does more right with the cap.

Also, when you're connecting the drinking tube to the canister, be sure the cap's valve pin is inserted. If it isn't

inserted use the tube's quick-disconnect plug to gently wedge the pin in place.



Then with an cap-like covering motion press the tube's plug over the pin. The drinking tube and cap connection must be good and tight . . . otherwise your drinking cap won't work.

Conrad's Mini Minis

GET A
MAINTENANCE
PROGRAM
CONGO



Appendix C

The next Operation: Write an your equipment records is getting feedback to get the equipment listed in Appendix C of the new edition of TM 28-220 (28 Dec 85). It only is half the items report, adds an SA 2406, 2407 and the SA 2408-7 usage report, and it's effective 15 Feb 76. The next next out is a SA Letter dated 11 Dec 88. (The new effective date changes the 1 Apr 76 date set previously by SA msg 201612.)

Power Shock

Remember — you have to do it by the numbers when you disconnect the power supply cables on the M18 (FWAC) computer. First, put the computer's circuit breaker on OFF. Second, unplug the M18's power cables. If the circuit breaker is not OFF, you'll be shocked when you unplug the cables.

GA-67 Parts

For GA-66 and GA-67 guys you need down now and find your repair parts in TM 28-220-209-207 (4 Apr 84) and TM 28-220-209-210 (4 Apr 84). Just remember that the maintenance words for your B and C models are in the TM 28-220-217-series parts. The repair parts made for all models (A, B, C) is in the TM 28-220-209-series P manual.

No Plate Changes

Here, model numbers on lots of generation have been changed from Army to DOD — with new FIB's assigned. But don't go hanging on plate photos or changing new FIB's. There's to be done at time of general overhaul at OMA Depot — no later. You can use a wired-on tag with the new info for convenience if you want. And you don't need to change accountability records.


Heater Caution

M18 and M18A1 heaters and CPU's warmers.

Remember, the M18 electric heaters, used on the M18A1 Gas Purification Filter Unit, have their own On-Off Switch. So, everytime you turn off the filter unit, you also have to reach over and turn off the heaters. When you stop the filter unit, you cut off the air flow through the heaters. And, without air flowing through them the heaters'll quickly burn up on you.

Instant Supply

Look us in SA Pam 280-25-1 and DA Pam 280-25-2 (Aug 84). They're loaded with unit supplyman and PL instructions. The -1 answers your questions. The -2 illustrates an maintenance of supply records and forms. They go together, as you need 'em both.

Would You Stake Your Life  on
the Condition of Your Equipment?

HIT THE
BULLSEYE

WITH YOUR
EIR



EIR MEANS
EQUIPMENT **I**MPROVEMENT
RECOMMENDATION.
IT COULD ALSO STAND FOR:
EXACT
IDENTIFICATION
RECORDED
ON YOUR
CA FORM 240X.